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***Teacher-student Communication in Taiwan Senior Education Contexts:
A Focus on Older Learners' Views***

Chin-Hui Chen, National Pingtung University of Science and Technology, Taiwan

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Abstract

Senior education has received increasing attention in Taiwan, as an active response to the dramatically ageing population. However, the existing literature has largely ignored the centrality of teacher-student communication to older learners' teaching and learning processes, and the potential improvement of those processes. This survey-based study of 231 older learners therefore focuses on their views of teacher-student communication in senior education, including the extent to which they endorse the various communication strategies employed by their teachers (identified in the author's previous project, see Chen, 2019) and the rationales for those strategies having been chosen. The findings reveal some interesting differences between teachers' views about appropriate teacher-student communication (captured in Chen, 2019) and older learners' parallel views. Older learners' demographic features also appeared to impact how they preferred to be communicated with in class by their teachers. Teachers of senior education can use these findings to better accommodate their teaching to older learners from homogeneous backgrounds.

Keywords: Senior Education, Teacher-student Communication, Communication Accommodation, Older Learners, Gerontological Sociolinguistics

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Introduction

The present study extends a previous project by the author, on teacher-student communication in senior-education contexts (Chen 2019), by eliciting older learners' views of teachers' self-reported strategies for communicating with them. Senior-education programmes have been heavily promoted in Taiwan as a response to the needs of its rapidly ageing population. Specifically, this is linked to a widespread belief that active participation in lifelong-learning activities into later life is a key to successful ageing: for example, by improving people's capacity to keep up with societal changes (Escuder-Mollon, 2012). The delivery of high-quality senior education generally relies on how teachers communicate with older learners (Chen 2019). A number of studies have addressed the importance of language and communication to students' learning behaviours (Goodboy & Myers, 2008; Lin, et al., 2017; Mazer & Hunt, 2008; Myers, 2002; Myers, et al., 2014; Rocca, 2004; Roorda, et al., 2011; Witt, et al., 2004). However, these studies have overlooked older learners' perspectives, a gap that the present study will help to fill.

Literature Review

Unusually, Chen (2019) made a case for systematically explaining the nature of teacher-student communication in senior-education contexts. However, that interview- and survey-based study only captured data about Taiwanese teachers' communication-accommodation strategies when teaching older learners. It categorised these self-reported strategies into four main types – secondary baby talk, mitigation, politeness, and code selection – and found that teachers' choices from among these four approaches could be governed either by teacher-level considerations, e.g., communicative aims, or student characteristics: e.g., physical decrement in relation to language production and reception; social status; place of origin; age range; and conversational needs. That study's detailed findings can be summarised as follows.

1. Taiwanese teachers of older adults adjust their communication styles to include secondary baby talk (repetition, simplification and slow-paced speech) because of the former's perceptions that the latter, especially those aged over 75, have low language-reception and language-expression abilities.
2. Mitigating strategies, characterised by avoidance or humour, are employed by these teachers to accommodate their students' painful self-disclosures, as well as what the teachers see as special communication/conversational needs arising from the fear of death.
3. Teachers use encouragement and compliments as politeness strategies to accommodate to older adult students' conversational need for strong face maintenance.
4. Loose control of turn-taking in class is used to accommodate older adult students' desire for a relaxing environment for both learning and friendship development.
5. Showing modesty and reverence is employed as a communication strategy particularly to accommodate older learners who have a high social status or come from urban areas. One expression of this strategy is the avoidance of direct correction of mistakes in class.
6. Telling jokes or showing playfulness while teaching is a communication strategy adopted to accommodate older students' need to learn in a relaxing atmosphere, and is seen as especially necessary or useful when students are from the countryside.
7. Teachers choose various forms of address to reflect their own choices of role positions in relation to their older students, or to demonstrate their politeness, reverence, or closeness.
8. When teachers are much younger than their students, it is more difficult for the former

to activate their professional identities, and this leads them to rely instead on age identity during teacher-student communication. The aim of the corresponding communication-accommodation behaviour is to emphasise politeness.

9. Taiwanese senior-education teachers often see themselves as service providers, which triggers their use of an encouraging, positive and playful tone in their teaching language, as part of providing a pleasant and satisfying learning environment for their students.

10. Code-switching is used by teachers of older students to demarcate between their teaching and social communication.

In addition to teacher interviews, Chen (2019) surveyed a wider pool of teachers about the degree to which they endorsed the four main types of communication strategy highlighted by the interviewees. Analysis of the survey data focused on the associations between the teacher respondents' age ranges and their use, or non-use, of each strategy. The findings arising from that survey are summarised below.

First, regarding communication-strategy choice:

1. The most frequently chosen forms of address for older students were 'grandpa/grandma' or 'older brother/older sister', rather than 'student'.

2. The use of patronising communication styles was prevalent among the majority of teachers of older students, especially 'slower pace of speaking' and 'repetition'.

3. The use of politeness strategies was commonplace among the respondent teachers, especially 'giving encouragement and compliments' and 'telling jokes and being humorous to please older students'.

4. Death-related topics were avoided in communication with older students by two-fifths of the respondents.

5. Choosing the language code preferred by older students in class was considered appropriate by most of the respondents.

Second, the associations between teachers' ages and their use of various communication strategies can be summed up as follows:

1. The two younger groups of teachers (<39 and 40-60) tended to address older students in class in ways that reflected intergenerational identities. The very youngest teachers (<39), meanwhile, were the least likely of the three teacher groups to adopt a professional identity in the classroom.

2. Teachers in the middle age group (40-60) were the most likely to use patronising communication styles, while the oldest teachers (61+) were the least likely to do so.

3. No significant association was found between teachers' ages and their use of politeness strategies.

4. No significant association was found between teachers' ages and their avoidance of death-related topics in communication with older students.

5. The middle age group of teachers was the most likely to use code-switching for communication with older students, while the oldest teacher group was the least likely to do so.

Research Gaps

As briefly noted above, Chen's (2019) data only represent one side of the teacher-student communication process. Teachers' accounts of the communication-accommodation behaviours they regard as appropriate may not accurately reflect older students' expectations or needs, whether because they are over- or under-accommodative. Thus, to enhance the

practical value of teacher-student communication in senior-education contexts, older learners' perspectives cannot be overlooked. The present study accordingly explores the level of consistency between teachers' and older students' views on how they should communicate with one another during the teaching and learning process. Specifically, it transformed Chen's prior findings on (1) the communication strategies, and (2) the perceptions/factors considered relevant to teachers' choices of such strategies, into questions for a survey of older learners. This survey aimed to ascertain which teacher communication strategies these learners endorsed, and what learner demographic features were linked to such endorsement and other relevant attitudes. The present study was guided by the following two research questions.

RQ1: To what extent do older learners endorse the classroom communication strategies self-reported to Chen (2019) by teachers of older learners?

RQ2: How do older learners' demographic characteristics relate to the extent of their endorsement of such strategies?

Methodology

The survey's questionnaire was divided into two main sections. The first elicited the participant's age range (55-65, 66-75, 76-85, or 86+) and health status (very unhealthy, unhealthy, moderately healthy, healthy, very healthy). The second section consisted of 12 items about the respondents' level of endorsement of teachers' various communication-accommodation strategies. These items, translated from Mandarin into English for the purposes of the present paper, were: (1) avoiding using jargon and difficult theories; (2) speaking slowly in class; (3) repeating previous teaching content; (4) avoiding referring to death or ailments in class; (5) using a playful tone for chatting or teaching; (6) avoiding correcting older learners' mistakes; (7) not controlling older learners' talking in class; (8) using an encouraging and complimentary tone when teaching; (9) occasionally using the dialects older learners prefer in class, rather than just speaking Mandarin; (10) maintaining a humble attitude when communicating with older learners; (11) using various forms of address (i.e., not just 'Students') when talking to older learners; and (12) using Mandarin when introducing difficult concepts or theories. All were rated on the same five-point Likert scale, ranging from 1='very unlikely to agree' to 5='highly agree'.

The associations between demographic factors and degrees of endorsement were examined statistically. Means were computed to assess the extent of the respondents' endorsement of the 12 accommodation strategies. To identify the impact of older learners' age ranges and health statuses on such endorsement, analyses of variance (ANOVAs) were employed.

Results

As indicated in Table 1, the survey subjects tended to endorse all 12 teacher communication strategies, with all means being above the middle of the scale ($M > 3$). The three most-endorsed strategies were (5), a playful tone, $M=4.17$; (8), an encouraging and complimentary tone, $M=4.16$; and (12), the use of Mandarin for difficult material, $M=4.08$. The three least-strongly endorsed communication strategies were (4), avoidance of references to death or ailments, $M=3.13$; (10), a humble attitude, $M=3.55$; and (6), avoidance of error correction, $M=3.62$.

Table 1. Older Learners' Mean Agreement with Communication Strategies

Strategies	Mean
(1) Avoiding using jargon and difficult theories	3.96
(2) Speaking slowly in class	3.86
(3) Repeating previous teaching content	3.75
(4) Avoiding referring to death or ailments in class	3.13
(5) Using a playful tone for chatting or teaching	4.17
(6) Avoiding correcting older learners' mistakes	3.62
(7) Not controlling older learners' talking in class	3.65
(8) Using an encouraging and complimentary tone when teaching	4.16
(9) Occasionally using the dialects older learners prefer in class, rather than just speaking Mandarin	3.93
(10) Maintaining a humble attitude when communicating with older learners	3.55
(11) Using various forms of address (i.e., not just 'Students') to talk to older learners	3.97
(12) Using Mandarin when introducing difficult concepts or theories	4.08

Relation of Learners' Age Ranges to their Levels of Strategy Endorsement

As shown in Table 2, ANOVAs indicated that the participants' levels of endorsement of six communication strategies varied significantly by age group. These six strategies were (3) ($p < .01$), (4) ($p < .05$), (6) ($p < .05$), (7) ($p = .01$), (10) ($p = .00$), and (11) ($p < .05$).

Table 2. Variation in Learners' Endorsement of Communication Strategies by Age

Communication strategies	Older learners' age ranges									
	55-65		66-75		76-85		total		Pearson correlation	Sig.
	Mean	N	Mean	N	Mean	N	Mean	N		
(1) Avoiding using jargon and difficult theories	4.08	106	3.81	83	3.90	39	3.95	228	-.078	.121
(2) Speaking slowly in class	3.80	106	3.83	83	4.03	39	3.85	228	.063	.173
(3) Repeating previous teaching content	3.66	106	3.70	83	4.08	39	3.75	228	.110*	.049
(4) Avoiding referring to death or ailments in class	2.87	106	3.22	83	3.62	39	3.12	228	.197***	.001
(5) Using a playful tone for chatting or teaching	4.18	106	4.07	83	4.33	39	4.17	228	.026	.346
(6) Avoiding correcting older learners' mistakes	3.45	106	3.61	83	4.08	39	3.62	228	.173**	.004
(7) Not controlling older learners' talking in class	3.50	106	3.63	83	4.08	39	3.64	228	.155**	.010
(8) Using an encouraging and complimentary tone when teaching	4.20	106	4.02	83	4.31	39	4.15	228	.006	.461
(9) Occasionally using the dialects older learners prefer in class, rather than just speaking Mandarin	3.92	106	3.81	83	4.23	39	3.93	228	.069	.149
(10) Maintaining a humble attitude when communicating with older learners	3.25	106	3.61	83	4.15	39	3.54	228	.251***	.000
(11) Using various forms of address (i.e., not just 'Students') to talk to older learners	3.90	106	3.83	83	4.46	39	3.97	228	.132*	.024
(12) Using Mandarin when introducing difficult concepts or theories	4.07	106	3.98	83	4.33	39	4.08	228	.058	.190

Specifically, post-hoc tests indicated that the main age difference in endorsement of the strategy of avoiding talking about death or ailments was between the 55-65 age group and the 76+ group, with the latter endorsing it significantly more strongly. Similarly, such tests established that the eldest learners endorsed teachers' avoidance of correcting their mistakes significantly more strongly than either the youngest ones ($p < .01$) or the 66-75 year olds ($p < .05$), perhaps indicating that the eldest learners had the strongest face-maintenance needs

of these three groups. Such an idea would also appear to be confirmed by the post-hoc tests' suggestion that the eldest learners endorsed (1) teachers' avoidance of controlling older students' chatting in class significantly more than those in the youngest group did ($p < .05$), and (2) teachers' exhibition of modest attitudes in class significantly more than the 55-65 ($p < .001$) and 66-75 year olds ($p < .05$). However, significant differences were also observed between the means of the 66-75 and the 55-65 year olds ($p < .05$), with the former being higher. The eldest learners also endorsed teachers' use of varied forms of address significantly more strongly than either their 55- to 65-year-old ($p < .05$) or 66- to 75-year-old counterparts ($p < .01$). In short, the older the sampled learners were, the greater their self-reported need to be accorded respect by their teachers.

The post hoc tests also suggested that the eldest learners endorsed teachers' use of students' preferred dialects to chat with them, to a significantly greater extent than either the 55-65 ($p = .001$) or 66-75 age groups ($p < .01$). This, too, could have been because such code-switching was seen as polite or even deferential.

Relation of Learners' Health Statuses to their Levels of Strategy Endorsement

As shown in Table 3, ANOVAs were conducted to investigate the relationships between older learners' health statuses – which they self-rated into one of five categories ranging from very unhealthy to very healthy – and the extent of their endorsement of the various communication strategies adopted by senior-education teachers. The strategies for which significant health-related differences appeared were (1) ($p < .01$), (2) ($p < .001$), (7) ($p < .01$), (8) ($p < .01$), (9) ($p < .01$), (10) ($p < .05$), (11) ($p < .05$), and (12) ($p < .01$).

Table 3. Variation in Learners' Endorsement of Communication Strategies by Health Status

Communication strategies	Older learners' health status														Pearson correlation	Sig.
	Very unhealthy		Unhealthy		Moderately healthy		Healthy		Very healthy		Total					
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N				
(1) Avoiding using jargon and difficult theories	3.75	8	3.56	9	3.72	75	4.00	80	4.30	57	3.96	229	.177**	.007		
(2) Speaking slowly in class	3.75	8	4.11	9	3.47	75	3.89	80	4.30	57	3.86	229	.204**	.002		
(3) Repeating previous teaching content	4.25	8	3.56	9	3.47	75	3.74	80	4.11	57	3.75	229	.124	.062		
(4) Avoiding referring to death or ailments in class	3.50	8	3.56	9	2.87	75	3.01	80	3.53	57	3.13	229	.082	.216		
(5) Using a playful tone for chatting or teaching	4.13	8	4.00	9	3.96	75	4.26	80	4.35	57	4.17	229	.115	.082		
(6) Avoiding correcting older learners' mistakes	3.50	8	3.67	9	3.45	75	3.62	80	3.86	57	3.62	229	.104	.117		
(7) Not controlling older learners' talking in class	4.13	8	3.56	9	3.17	75	3.69	80	4.18	57	3.65	229	.201**	.002		
(8) Using an encouraging and complimentary tone	3.88	8	3.67	9	3.99	75	4.18	80	4.47	57	4.16	229	.174**	.008		
(9) Occasionally using the dialects older learners prefer in class, rather than just speaking Mandarin	4.25	8	3.78	9	3.55	75	3.98	80	4.37	57	3.93	229	.190**	.004		
(10) Maintaining a humble attitude when communicating with older learners	4.00	8	3.67	9	3.01	75	3.79	80	3.82	57	3.55	229	.148*	.025		
(11) Using various forms of address (i.e., not just 'Students') to talk to older learners	4.00	8	4.00	9	3.63	75	4.06	80	4.30	57	3.97	229	.158*	.017		
(12) Using Mandarin when introducing difficult concepts or theories	4.00	8	3.67	9	3.83	75	4.13	80	4.44	57	4.08	229	.189**	.004		

Post-hoc tests indicated that very healthy learners agreed that teachers should speak slowly in class significantly more than those whose health was good ($p < .05$) or moderate ($p < .001$). Healthy learners also showed the same pattern, as compared to those whose health was moderate ($p < .05$). Endorsement of teachers' repetition of previously discussed teaching content was also significantly stronger among very healthy learners than among their moderately healthy counterparts ($p < .01$). This seems to imply that healthier the sampled learners were, the more likely they were to endorse their teachers' use of secondary baby talk and patronising communication styles.

The post-hoc tests for the item on teachers' loose class management indicated that the main differences were between (1) very unhealthy students and those whose health was moderate ($p < .05$, with the very unhealthy ones endorsing this style more strongly); (2) healthy ones and those whose health was moderate ($p < .01$, with the healthy ones agreeing more); (3) between the very healthy ones and those whose health was moderate ($p < .001$, with the very healthy ones agreeing more); and (4) between the very unhealthy ones and those who were very healthy ($p < .05$, with the very healthy ones agreeing more). Generally speaking, in other words, older learners who were in better health were more likely to endorse teachers' flexible class management, but those in the worst health also strongly demanded flexible learning environments from their teachers.

The post-hoc tests for the item on code-switching suggested that very healthy learners endorsed this practice significantly more than healthy ones ($p < .05$) or moderately healthy ones did ($p < .001$). Learners whose health was above average also endorsed code-switching significantly more strongly than those whose health was moderate ($p < .05$). That is, learners with better health were more likely to demand more flexible codes from their teachers in class.

The post-hoc tests for the item on teacher humility suggested that very healthy learners ($p < .001$), healthy ones ($p < .001$) and very unhealthy ones ($p < .05$) all endorsed teacher's showing modesty in class significantly more than those whose health was moderate did.

Learners who were healthy ($p < .05$) and very healthy ($p < .01$) exhibited significantly greater agreement with teachers' use of various forms of address in class, as compared to their moderately healthy counterparts.

As to the main difference involving to the use of Mandarin for difficult concepts or theories, very healthy older learners endorsed this communicative approach significantly more strongly than those whose health was moderate ($p < .01$).

Discussion and Conclusion

On the whole, the sampled older learners strongly endorsed the communication strategies senior-education teachers told Chen (2019) they adopted. However, these learners did not appear to consider teachers' showing respect to them, or avoiding references to death and ailments, as critical to fostering pleasant learning or communicative processes characterised by humour, fun and relaxation (see the strategy of using playful tone to chat or teach in the survey).

Age was previously found to be a significant predictor of teachers' communication accommodations when teaching older people (Chen, 2019). The present study's results reveal that teachers particularly need to communicatively accommodate learners aged above 75, who appear to have the strongest face and politeness needs. Such accommodation could take various forms, including avoiding death-related taboo topics; attending to politeness and respect, as defined by not correcting them; maintaining relatively loose classroom control; choosing appropriate forms of address; demonstrating humility; and using their preferred language codes when interacting with them socially (but perhaps not when teaching). This echoes Chen's (2019) findings regarding the opinions of teachers of senior education, who further ascribed the need for communicative accommodation to learners 75+ to physical decline, and therefore regarded patronising communication styles to be appropriate. However, the present study did not find that strategies such as slower teaching or repetition of taught information were significantly more strongly endorsed by learners 75+ than by those aged 55-74.

Among the learners in this study, health status also seemed to have an impact on how teachers' communication-accommodation behaviours were viewed. First, contrary to the researcher's expectations, teachers' employment of patronising communication styles was strongly endorsed by learners whose health was below the average, perhaps because their health conditions negatively affected their reception and/or comprehension of information. However, learners who self-reported the worst health did *not* endorse such communication styles to a greater extent than those whose health status was better than the average. Indeed, those learners who reported good health endorsed these patronising styles the most clearly. This may have reflected the healthy learners' generally more demanding attitude toward teachers' communication accommodations: e.g., they also agreed that teachers should give them more autonomy of talking in class, use code-switching to facilitate their learning as well as social purposes, show them respect via being humble, and address them in appropriate ways.

The above results confirm the diversity of older learners' perspectives, as well as some slippages between students' and teachers' views of the latter's stereotypical or patronising communication-accommodation strategies (cf. Chen, 2019). Teacher-student communication processes in senior education in Taiwan would therefore appear to be more complex than teachers of older learners tend to imagine. And such learners' demographic characteristics, notably age and health status, should add additional nuance to teachers' calculations of how they should communicate in senior-education classes. Future research comparing teachers' and older learners' perceptions of what communication strategies are appropriate in such settings should take account of further demographic factors.

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Discourses and Counter-discourses in the Times of the Coronavirus Crisis

Jan Demcisak, University of Ss. Cyril and Methodius in Trnava, Slovakia
Simona Frastikova, University of Ss. Cyril and Methodius in Trnava, Slovakia

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Abstract

The situation of the global coronavirus crisis affects different areas of human life and also influences the use of language. A new kind of discourse is emerging, in which politics, health care, the media and many other actors participate. In our article, we deal with the "coronavirus discourse" from the point of view of right-wing populist parties who create a special narrative that is often directed as a counter-discourse against the rhetoric of official political decision-makers or the mass media. This constellation of speech and counter-speech can be examined methodologically from the position of critical discourse analysis in the sense of Michael Foucault. In addition, the performative aspect of linguistic utterances in the tradition of John Austin can also be considered in this context. In a combination of the two methodological approaches, our study examines which effects, with which linguistic means and with which intentions are constructed by language in this pandemic situation.

Keywords: Covid-19, Right Wing Populism, Political Discourse, Frequency Analysis, Contextual Analysis

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Introduction

This short study is part of a larger research project dedicated to a broader analysis of language strategies among right-wing populist parties at the level of lexicon, text and discourse. Our contribution is derived from an analysis of postings published in the Freedom Party of Austria's (FPÖ) Facebook page, which focuses on them complemented with visual material. It takes a look at the specific discourse led by the FPÖ after the outbreak of the COVID-19 coronavirus pandemic. Out of a total 388 text-image units appearing between January and December 2020, 195 mention the pandemic, political solutions thereto and the impact on society. Even though the coronavirus was only discussed for the first time on the FPÖ's Facebook page in February 2020 and it can theoretically cover almost the entire calendar year, the pandemic cannot be seen as clearly dominant because of the relatively large space devoted to other themes (identified in the remaining 193 examined units), with migration, immigration and Islam having been by far the issues most frequently discussed. In some cases, as will be shown later, they even overlapped with the COVID-19 pandemic crisis. In addition to the two thematic areas mentioned, some specific political situations within Austria (mostly associated with criticism from opponents) and very marginal environmental issues sporadically appear.

Within the examined units themselves, we concentrated on messages that had been included in graphics or images because they were supposed to attract the attention of recipients. These text units – predominately passwords, short sentences and word combinations – were then transcribed, evaluated for frequency and interpreted from narrower thematic contexts with information from accompanying posts contributing to the interpretation. Once they had been analysed for frequency and context, we then sought to draw attention to the performative aspects of language conversations and at the end analyse from the perspective of critical discourse and an ideologically critical view of the phenomena that has appeared over the course of the present coronavirus crisis.

Frequency Analysis

A frequency analysis of individual words in a graphic or image show the most commonly used terms (excluding articles, prepositions, auxiliary verbs, and similar non-meaningful terms) to be *schwarz* ("black" in 7th position), *nicht* (no, not – 10th position) and *Österreich* (Austria - 11th position). The term *Corona* was found in 13th position, followed by the expressions *ÖVP* (Austrian People's Party, 15th position) and *grün* (green, 21st position). Examining how often words occur from the perspective of expanding semantic fields, the following expressions dominate (see Table 1). These frequencies empirically affirm existing characteristics and findings concerning the language of right-wing populism (see for example Decker & Lewandowsky 2017, Štefančík & Dulebová 2017, Müller 2019, Schuppener 2019 and others). First and foremost, it includes political and populist rhetoric toward building identity based itself on opposition to a political adversary. Logically differentiating us versus them should, as a rule, be accompanied by the semantic principle of negation. This field could be theoretically expanded to include other expressions with negative connotations that relate to the actions and decisions of a government and its political parties such as *versagen* (deny) *Verdacht* (suspicion) and *Skandal* (scandal).

	Semantic field	Expressions	Occurrences
1.	competing political parties, expressed by their abbreviations and symbolic colours	<i>schwarz, grün, ÖVP</i>	171
2.	negative expressions	<i>nicht, nichts, kein, nein, gegen, niemals</i>	135
3.	own identity	<i>FPÖ, wir, uns, unser ... (excl. party logo)</i>	95
4.	migration, refugees, asylum, Islam	<i>Migranten, Migration, Flüchtlinge, Flüchtlingspolitik, Asyl, Asylwerber, Islam, Islamismus, Muslime ...</i>	79
5.	Austria	<i>Österreich, Österreicher...</i>	76
6.	corona	<i>Corona, Coronavirus, Covid...</i>	56

Table 1: Word Occurrences (Semantic Fields)

An essential component in the identity of populist parties is their patriotic nature and closeness to the people, where they are understood to be primarily a national entity. For this reason, too, it is understandable for national identity (Austria, homeland) to be among the most frequently cited topics. National self-confidence, like party identity, is formed from its relationship to anything foreign. Migrants, asylum-seekers, refugees and adherents of Islam constitute a unified set of ideas that describe something “foreign”, over which own identity and nationality is triumphing (on the problem of Islam in right-wing populism cf. Schuppener 2020 or Fraštková 2019). This method of creating subjectivity corresponds to the theory expressed by Jacques Lacan and his psychoanalytical clarification of identity and subject formation in the so-called “mirror stage”, in which the constellation of “*I*” and “*other*” play a critical role (Horatschek 2013).

A certain paradox is apparent at first glance in connection with the coronavirus discourse, to be pursued further here. Even though about half of the analysed units could have been assigned to this thematic area, the frequency analysis showed the semantic field to be smaller in comparison to the others and not to correspond to the frequency of the topic as such. A closer contextual analysis and identification of the themes and subthemes associated with the examined discourse could shed light on why this is the case.

Contextual Analysis

Mention of the COVID-19 pandemic was first posted by the FPÖ on its Facebook page in Figure 1, with Chairman Norbert Hofer predicting that, were it to reach Austria, it would already be too late. The illocutionary act of his utterance was a certain warning, or rather a challenge, to provoke a perlocutionary act of action and response to the situation. The party simultaneously published a survey (Figure 2), asking respondents whether the government was currently putting adequate measures in place against the pandemic. Yet the question itself rather seeks to cast doubt about the government's ability (illocution) and expects such an attitude from recipients of the message (perlocution).



Figure 1



Figure 2

Postings that immediately followed the two above confirmed this intention. The party was now proposing its own solutions, such as border controls (Figure 3) and then joined both premises together (casting doubt about what the government's actions and proposing its own solutions) (Figure 4).



Figure 3



Figure 4

The connection between them intensifies the narrative that has been created and, in its own way, multiplies the possible perlocutionary acts. Here the binary of thinking and contradiction are used to the fullest, thereby contrasting the government's actions and the coronavirus threat, and so verbalised in the phrase *trotz großer Gefahr* (in spite of the grave danger). Simultaneously, other logical conclusions are implied. The expression *Gefahr* (danger), while bound primarily to the coronavirus, is transmitted in parallel to the word combination of "*offene Grenzen*" (open borders), hence the danger becomes open borders and not COVID-19 as such. In addition, the binary logic system arranges these oppositions on a vertical axis. The lexical unit *etw. über etw. stellen* (superimpose sth. on sth.) evokes a government putting its open border policy before the welfare of its citizens. In this case, Austrian citizens (the recipients of the message) have been now positioned at the bottom of the hierarchy, with open borders, COVID-19 and the danger stacked above them. This development comes together with a government which, by virtue of its governance along with the power to make decisions and privilege certain elements, such as open borders before people, now stands above the people and occupies the same level as COVID-19 and the threat of contracting it. By evoking one of the basic features of populism in the context of COVID-19 discourse, thematising and recalling the constellation and popular opposition (as the FPÖ acts on behalf of the people) while pitting it against the ruling elite in thinking *us* versus *them*, such an environment of competition becomes, as our frequency analysis above shows, the number one thematic unit.

The basic strategy leading to such an objective combines partial and seemingly isolated phenomena and problems into higher thought units, which can produce several logical conclusions depending on the chosen thought process. This enables thematisation and addresses one agenda with another. The FPÖ's first solution to the COVID-19 outbreak – border controls – is not entirely without precedent. The thematisation of national borders and “protecting” them had been one of the main topics of the pre-COVID-19 period, as documented in Figure 5. In this context, the border becomes a symbolic boundary for one’s own national, cultural and religious identity, with right-wing populist rhetoric describing foreigners – migrants and asylum seekers – as a clear and present danger. Addressing the issue in the wake of the new threat of global pandemic enables the FPÖ, in a simplified and figurative way, to “kill two birds with one stone”.



Figure 5



Figure 6

In terms of frequency, it is even found among the topics most represented in creating the contextual framework for the coronavirus discourse. Several narratives can also be identified therein. Following up on the symbolism of the border, passage across it becomes two-way – open to asylum seekers but closed to Austrian residents (Figure 6). In this case, the expected perlocutionary act is acquiring a sense of injustice and unequal treatment. Like the example in Figure 4, the government is again referenced as having originated the situation and resulting vertical stratification. Besides becoming an intermediary in feelings of injustice and privilege, foreigners appear now in another narrative to be a direct epidemiological threat, carrying a dangerous disease, with action needed to be taken against shelters as sources for the outbreak of infection (Figure 7 and 8). Such active discourse mechanisms thereby contribute toward the creation of a clear stigma reminiscent of how migrants and asylum seekers were earlier stigmatised as terrorists and rapists. This is because both stigmas pose an immediate threat to life and limb. The force and intensity of such stigmatisation can be justified, among other things, by its direct relationship to the Foucault term “bio-power”.



Figure 7



Figure 8

As a modifier at other levels, the COVID-19 crisis starts appearing in the migration and asylum policies that are the FPÖ's main platform. The significantly accelerated digitisation of various areas of society now allows applications for asylum to be submitted electronically, a development right-wing populists see as a new potential issue to exploit – *Cyber-Schlepperei* (cyber-smuggling of aliens) and which of course they refuse to countenance (see Figure 9). The end result is COVID-19 seen as a cover-up manoeuvre and distraction from “true” problems, such as the violence the FPÖ blames on migrants. Here, the connection becomes apparent only secondarily in the accompanying posting.



Figure 9



Figure 10

Throughout 2020, asylum seekers; migrants and, in direct connection, Islamism were accomplices in the FPÖ's political discourse, even separate from COVID-19, with clear escalation after the terrorist attack that took place in Vienna on 2 December.

Returning to the COVID-19 discourse and the focus on identifying other contexts and thematic links, the main points of discussion in this paper, the economic impact of the coronavirus pandemic can be described as significantly resonant and the most commonly occurring subtopic. The high frequency is quite understandable because the economic aspect directly affects ordinary people and offers a strong potential not only for criticising the government as the main “enemy” but also enables formation of a strong coalition of the dissatisfied. In response to such dissatisfaction, the FPÖ turns mainly to emotional strategies based on (pseudo-) empathy and solidarity. Word combinations they use include expressions such as “*the government doesn't make it easy*”, “*the government is destroying jobs*”, “*the government mustn't touch our savings*”, “*there's a new wave of poverty coming*”, “*they've ruined our economy*”, “*they're bringing people to their knees*” and more. The instrumentalisation of emotions can be documented in the following two postings, which concurrently point out the internal conflict between the emotional and rational sides of this strategy. Figure 11 criticises government measures, hyperbolically likening them to a tsunami that may ultimately create among recipients of the message a sense of danger and panic, which the poster wants to see stopped. The paradox of this utterance is that the locutionary act itself denies having incited the perlocutionary act. In the same way, the utterance deconstructs itself. Figure 12 once again characterises the pathos of the climax (*Only after the last person has lost their job and the last inn has been closed down*) and accordingly the paradox of the climax culminates in an event that preceded its first two stages (when they learn that Chancellor Sebastian Kurz should never have been elected to the post), so initiating the entire climax.



Figure 11



Figure 12

A similar example involves the creation of logical connections in situations where they would not be expected. Both of the postings in the next row (Figures 13 and 14) do not directly thematise the COVID-19 crisis. It is only referenced in the accompanying text. Yet they suggest lifting the ban on smoking in restaurants and payment in cash will alleviate the crisis in the restaurant and catering industry (because of the coronavirus crisis). In both cases, their main argument is the invocation of civil liberties, guaranteeing people a choice of whether or not to eat at a restaurant where people smoke and whether or not to use something other than cash. Both trends (no smoking and the spread of noncash payments) are seen here as detrimental to businesses.



Figure 13



Figure 14

While the use of unusual or paradoxical logic may have no significant impact on those receiving the message, Figures 15 and 16 are nevertheless unambiguously stigmatising. As analysed earlier, these examples seek to create complex thematic links, stating that the economic impact of the COVID-19 crisis on people in Austria and Europe has a connection with people living in other regions of the world (such as Africa and Syria in the Middle East). The aim here is to evoke a sense of outrage that, even though “we” in Europe are having it bad enough (*every penny is needed, there is a lot of unemployment here*), others are getting financial support and profiting at “our” expense.



Figure 15



Figure 16

Activating the scheme of “us” versus “them” can arouse envy, i.e. provoke a perlocutionary act. But even at the bio-power level, it can initiate the “natural” instinct of self-preservation. Nonetheless, direct biological metaphors are also used in the complex relationship between the economy and the impact of the COVID-19 crisis on it. For example, Figure 17 sends a message about the *death knell of the restaurant industry* and Figure 18 calls members of the governing ÖVP-Green coalition *the gravediggers of Austria*, where the context of the latter posting speaks not only about the economy, but also education and the rule of law, which the coalition government is allegedly burying.



Figure 17



Figure 18

Both of these areas can be considered further thematic subheadings appearing in connection with the COVID-19 discourse. The issue of education can be more or less narrowed down exclusively to whether schools should remain open or be closed (denying children the right to education) and if children in school should be required to wear masks. Again, monitoring the plane of their reasoning is rather intriguing in the examination of their explanation of why the wearing of masks would not be appropriate. The reason is *rapid fatigue in children and worsened concentration*, or as Figure 19 shows, to give children the opportunity of learning how to recognise mimicking behaviour. Two postings with different aspects seek to guarantee these two points. The first of them shows two women holding doctorate degrees and refers to mothers, while the other posting points out that neither of the government coalition leaders have children of their own, so they lack the competence to decide about them. Hence, the FPÖ utilises biology and the weight of authority to bolster their argument, yet they are only based on the social roles of these doctorate mothers (one a lawyer and the other a medical physician) and not on verifiable facts.



Figure 19



Figure 20



Figure 21



Figure 22

Obviously, adults have also been caught up in the issue of wearing face masks and especially in western countries this symbol can be compared to the face of the god Janus. While the face in one direction is beaming at the solidarity of people as they combat the pandemic, the face in the other direction is concerned about civil liberties limited by forced government measures. This duality can also be observed in the FPÖ's changing rhetoric. While in the initial phases of the pandemic in March 2020, masks were displayed neutrally either with no connotations whatsoever or positively (*vitally important medicinal products*) (see Figure 21), it had turned by sometime after May 2020 into a rejected artefact (Figure 22). Interestingly enough, right-wing populists can equally instrumentalise both positive and negative connotations to make them tools for strengthening patriotism. Patriotism likewise plays a major role in connection with the earlier outlined context of the COVID-19 pandemic's impact on the economy, mainly in calls directed to support the national economy and also to reinforce self-sufficiency, particularly in the food industry. Notwithstanding, the pandemic has fuelled the expansion of the right-wing populist agenda into health, which now ranks first in the list of outlined focal points, such as in Figure 23 (*Protect Austria. Health. Jobs Economy*).



Figure 23



Figure 24

However, the patriotic and national aspect, as evidenced in the frequency analysis, still “plays second fiddle” to the political aspect, primarily the definition of the party’s own identity in contrast to the political competition and government elites. The preceding analysis of the economic context has in turn hinted at the exploitation of these problematic situations and the population’s dissatisfaction with the government and its actions to combat the pandemic, in order to build a common alliance and win the sympathy of potential voters by taking their side and finding a mutual enemy. A much broader area for populists, outside of the economic impact of the COVID-19 crisis and the arrival of the opportune moment to criticise the governing coalition, is the opportunity to establish a grassroots alliance aimed at combating the state’s overall intervention in people’s daily lives. This chance comes and can be seized because, during a crisis or national emergency, government’s power and options naturally escalate the constellation of *us* (the defenceless and powerless) against *them* (the virtually omnipotent). In times of crisis, a populist politician will enter the scene as a saviour, like the man in Figure 24 analogous to the messianic feature found in populism. He not only brings solutions, but also bears the truth (Figure 25), which can catch fire and spread, provided freedom of opinion and expression can be guaranteed (Figure 26).



Figure 25



Figure 26

Accordingly, it represents rationality and common sense in contrast with *us* versus *them* (with *us* being the right-wing populists). Now the government, cast in the role of “*them*”, stand accused of *deception*, *illogicality*, *madness* and *chaos* in their decisions and regulations, raising questions about legitimacy. It is exactly in such extreme situations that populism returns to its key concept, the people. Talking directly about government of the people (democracy) in the depths of the COVID-19 crisis, populists thematise the boundaries of democracy and reach for lexical units such as “*Parlament entmachten*” (parliament stripped of its powers), *Propaganda* and *Diktatur* (dictator), highlighting the dysfunction of fundamental government institutions such as Parliament, the Austrian Government and the President (see Figure 27 – 30).



Figure 27



Figure 28



Figure 29



Figure 30

Various examples of government exercising its power, by forcing people to wear masks and to undergo vaccinations, testing and lockdowns, are joined along with lexical units such as “chicanery”, “duress”, “betrayal”, “intolerance”, “failure”, “misfortune”, “chaos”, “scandal”, “inability” and “neglect”. These are negative connotations that correspond with often-used negative expressions, as it also developed at the beginning of the frequency analysis. All of these expressions simultaneously characterise political adversaries and the government elite, attributed to *social coldness*. The posting in Figure 31 poetically points out the parallel between the first letters of the German words *soziale Kälte* and the initials of Austrian Prime Minister Sebastian Kurz, tagged at the end of 2020 along with his interior minister with the title of “*Kerkermeister der Österreicher*” (jailer of Austria) in Figure 32. The text accompanying the posting radically compares the restrictions on freedom of movement and the health policy to the apartheid system that once existed in South Africa.



Figure 31



Figure 32

Conclusion

Looking at the analysed material as a whole, it could be said that it creates a narrative arc. The story begins with affirmative utterances highlighting the need to act, followed by appeals from the FPÖ for cohesion and asking people to stand together. Exceptionally, it even exemplifies their failure to comply with government measures to stem the outbreak as a reckless threat to others. The feeling of solidarity is multiplied by numerous thanks to various professional groups for their work and the struggle against the pandemic. Nevertheless, the coronavirus discourse was linked even at this very early stage to the party’s own political agenda, with migration, asylum policy and Islam forefront issues in contrast to their own national interests and patriotic attitudes. In this respect, it became subject to strategic re-contextualisation and political instrumentalisation. Some authors have pointed out that some of the exaggerated panic in response to the COVID-19 pandemic was strongly incited by racism, for example when COVID-19 itself was called a Chinese virus (Agamben 2020, on the other hand cf. Žižek 2020). Our analysed examples accuse foreigners and representatives

of other nationalities of carrying the threat of disease and concurrently benefiting from double standards, symbolised by the permeability of boundaries from the outside in, but not from the inside out. Another important aspect of the response to the COVID-19 pandemic is the element of social control. While initially affirmative, the motivating rhetoric dissipates into a narrative that exacerbates the conflict between ordinary people and Austrian citizens on one side and the ruling elite on the other. Where the initial act of illocution was a call to act quickly and respond to the pandemic threat, there was an ever-growing discourse toward criticising and permanently negating any act of state power, with the right-wing populists seeking to form an alliance with the dissatisfied and attempting to win them over. At the same time, they were purposefully using emotional strategies and activating the logic of hierarchical opposition. What they primarily underscore is suppression of rights and liberties, bullying by the state, the creation of different categories of the population, double logic in the government's failure to comply with measures they put in place themselves and finally classifying asylum seekers as common enemies. In general, the discourse is dominated by negatively connotated lexical units. Thus, the entire narrative arc shifts the need for protection from the coronavirus to the government itself and its measures, transforming a biological and natural danger to a political threat. Yet in both cases, right-wing populists have the opportunity to express their messianic traits and offer a path to salvation. In essence, populist discourse creates a counter-discourse to the existing government discourse, but without itself acting subversively toward deconstruction of power because it is essentially itself pursuing objectives of power, instrumentalising individual elements and components of the discourse. Upon a closer analysis of right-wing populist language and rhetoric, it is noticeable that lexical units are often used ambivalently and evoke at once both positive and negative connotations, depending on whether they relate to “*us*” or to “*them*”. Accordingly, they are used to connect thematic units to more complex units utilised to activate and multiply a wider spectrum of perlocutionary acts and also to mask their own logical inconsistency.

Penetration into geopolitical and historical discourse likewise plays a certain role here, when “modern” dictatorships and propaganda are compared to practices of states designated as East Bloc or to dictatorial and racist practices of the past.

From a comparative perspective, the study provides further space to compare Austrian discourse specifically with the situation and developments in other countries. Because the authors of this study come from Slovakia, there is no failure to notice several parallels with its own domestic political scene in terms of both general rhetoric and specific details (thematically summarised in government measures for the restaurant industry, fitness centres and in the conduct of weddings and funerals, as well as by scandals caused by government officials failing to comply with their own measures, two-metre social distancing, the threat to traditional and Christian holidays and the contradiction and illogicality of decisions, among other things). These aspects may be the subject of further research.

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Contact email: jan.demcisak@ucm.sk
simona.frastikova@ucm.sk

***The Rhetoric of the Freedom Party of Austria in the 2019 National Council Elections –
Lexicon, Pragmatics, Discourse***

Simona Fraščíková, University of Ss. Cyril and Methodius in Trnava, Slovakia
Ján Demčíšák, University of Ss. Cyril and Methodius in Trnava, Slovakia

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Abstract

Our study deals with the language of the Freedom Party of Austria in the early elections to the National Council in 2019. It analyzes the party's rhetoric after the corruption scandal that led to early elections. The linguistic analysis takes place in three stages. First, the lexical level of the language is examined - in particular the choice of topics and the associated flag words and stigma words. Then the pragmatic aspect should be discussed - the intentionality and the effect of language, especially the rational and emotional appeals in comparison, are analyzed. Finally, the party's rhetoric is viewed in the context of general political discourse, which is about claims to power and manipulation. The analyzes and discussions should help to better understand the mechanisms of right-wing populist rhetoric.

Keywords: Right-wing Populism, Early Elections, Lexical Analysis, Flag and Stigma Words

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Introduction

Election campaigns provide space for a political party to muster its forces and a wide range of options exist not only for influencing undecided voters as effectively as possible, but also to strengthen their already existing electoral base. Every political party is equally aware that, if a strong bond exists, its constituents can keep a political party in parliament for a longer period of time and the party becomes more resilient in the face of any scandals and attacks upon it. One of the most intrinsic and at the same time most accessible methods for approaching voters is communication, so it is no wonder that language plays a critical role in pre-election campaigning. The way a political party speaks to voters either directly or through intermediaries, how it thematises current issues and verbally puts forward suggestions for resolving them, and how it formulates its promises all have an impact on the voters the party is addressing and its message. Therefore, the language patterns any political party uses in a pre-election campaign will be among its pinnacle efforts, linked to strategic intermediate steps and the targeting it undertakes throughout the entire campaign process.

A stable and responsible electoral base is the prerequisite for any political party to be successful in elections, at the very least at remaining in parliament over several terms. Of course, any political party can be both incredibly successful and yet remain more or less stagnant. The Freedom Party of Austria's (FPÖ) constituency, discussed in this study, formed slowly and in stages like other right-wing populist parties that have evolved in Europe, such as the Alternative for Germany (AfD), People's Party Our Slovakia (ĽSNS) and Freedom and Direct Democracy (SPD) in the Czech Republic. Graph 1 maps out the popularity Austria's political parties have seen over its post-war history and it particularly makes clear the more turbulence these parties have encountered in elections since 1983. Starting in 2002 (see Table 1), the FPÖ's political fortunes were rising, a trend that was cut short in 2019, when the so-called "Ibiza Affair" sparked an early election for the National Council (*Nationalrat*), the lower house of the Austrian Parliament.



Figure 1: National Council Elections in Austria (1945-2017)

(<https://www.vienna.at/die-nationalratswahlen-von-1945-bis-2017-chronologie/6312532>)

Elections to the National Council	2002	2006	2008	2013	2017	2019
FPÖ's share of the vote	10.01%	11.04%	17.5%	20.5%	26%	16.2%

Table 1: Percent of the Votes Won by the FPÖ Won in National Council Elections Held since 2002

(<https://www.bmi.gv.at/412/>)

Examining the percent of the vote the party had received, it is visible that the FPÖ was enjoying extraordinary success in its most recent campaigns prior to the Ibiza Affair. Although the party experienced a significant drop in support in the 2019 parliamentary elections, from a longer-term perspective it was able to retain a permanent base of supporters who still strongly identify with the party, even with the various type scandals that have embroiled the FPÖ.

This study focuses on the campaign period prior to the 2019 elections and the necessity for calling early elections after a video recording was published by the *Süddeutsche Zeitung* and *Spiegel Online* on 17 May 2019 that showed then party boss Heinz-Christian Strach and deputy leader Johann Gudenus, an FPÖ Member of Parliament, discussing corrupt activities and illegal financing in the run-up to the 2017 parliamentary election (for more information, see <https://www.tagesschau.de/ausland/oesterreich-ibiza-video-berlin-101.html>; https://www.welt.de/politik/ausland/article_193794769/Strache-Affaere-in-Oesterreich-Was-wissen-wir-ueber-das-Ibiza-Video-wissen.html). The conversation between them and a woman posing as the niece of Russian oligarch Igor Makarov, who would have supposedly become a partner in these illegal activities, was captured during a meeting on the island of Ibiza (hence the Ibiza Affair) and the video was released almost two years later. In the wake of the Ibiza affair, the coalition between the Austrian People's Party (ÖVP) and the FPÖ collapsed in May 2019. Nonetheless, there were also questions raised about the further direction of the Freedom Party which were primarily associated with the need for it to respond quickly to the scandal with appropriate changes in its internal structure as it prepared for the early elections announced for 29 September 2019. This analysis stresses the last aspect, which is also reflected in the first. Considering the vigorous inference of consequences to be drawn from the Ibiza Affair on the level of changes in the government's structure and the rhetoric connected therewith, there was anticipation that certain changes in the FPÖ's approach would be taking place during the election campaign. The early elections were marked by a different dominant theme from previous elections. The main issue was now climate change and policies to combat it. (<https://www.tagesschau.de/ausland/oesterreich-wahlkampf-105.html>). An analysis of empirical material shows the extent the FPÖ was able to brush aside the refugee issue, removing it from the spotlight.

The objective is to highlight the verbal patterns focusing on content and sub-aspects that somewhat "caught the eye" in the FPÖ's early election campaign. Here, language is either key or, in connection with the visual element, an accompanying but no means less important element in deliberately sharing certain content. The analysis accordingly includes a lexicon concentrating on identifying flag and stigmatising words. Considering how strongly persuasive language can be in an election campaign, the choice of lexicon and the application of other, primarily linguistic elements in correlation with visuals, will point in a similar way to a strategic and intentional process aimed at reinforcing lasting trust in the FPÖ and winning back the confidence of voters it had lost in the scandal.

One device commonly used in the election campaign was campaign posters and leaflets. Sharing them (also) on social networks let the material receive mass coverage and enabled the FPÖ to reach out to their constituents, while also making these flyers and posters easily accessible in relative terms for various types of analysis. This type of empirical material is used in the analysis conducted for the study. Specifically, it concerns campaign posters shared on the FPÖ's official Facebook page between the time when the Ibiza Affair broke and the September 2019 elections (<https://www.facebook.com/fpoe/>). There are a total 144 posters and leaflets from this period covered by the database.

Theoretical Background for Analysis of the Right-wing Populist Language Used by the FPÖ in the 2019 Election Campaign

The FPÖ's Ideological Pillars and Strategy

Populism in general, like right-wing populism, is a favourite topic of discussion even among professionals. Many political parties show elements of populism, especially during the run-up to elections, despite vehement denials of any consideration of them as populist. Yet this is because right-wing populist parties have been particularly successful in recent years. This is why the origin of their success has been and still remains the subject of discussion, not at all perceived in a positive light from the standpoint of all experts.

Given the nature of the study, and also in order to grasp the empirical material more comprehensibly, this analysis will divine at least the FPÖ's ideological direction and the strategies practised by it. At present, a detailed characterisation of right-wing populism can be found in the literature, which makes it not so challenging to identify the political approach taken by the parties identified with it. The following central ideological elements and strategies found in right-wing populist parties have been described by Decker/Lewandowsky, 2017; Prantl, 2017; Priester 2017, 2012; Spier, 2006; Taggart, 2004 and others:

- Appealing to “down-home” values and common sense
- Patriotism derived from religion, ethnicity and culture Emphasising “us/our country/ours” versus “them/foreigners/the enemies out there”
- Fostering anti-establishment (anti-elite, anti-intellectual) attitudes that are aversive to hateful toward supranational institutions)
- Taking the point of view of “us” instead of “me”
- A charismatic leader at the head of the party
- Fairness a key value
- Extraordinary level of social engagement
- Simplification of complex issues, naming them directly and advocating radical solutions
- Emotional appeals to voters
- Use of different kinds of statistics to make points
- Polarisation and moralisation

Persuasiveness of Language and Its Domination in Election Campaigns

Language and its use in politics are characterised by certain functions that reflect a politician's or political party's intentions. They are fulfilled depending on how language is used in the corresponding political reality and characterised by the specific relationship between the political party as either the ruling or representative element with the population as the controlled element. In such an environment, there are corresponding competencies, types of texts and situational contexts. By their nature and the different ideologies along the political spectrum, election campaigns fall into a segment of political reality characterised by political advertising and propaganda (Girnth, 2015, p. 47; Dieckmann, 2005, p. 25). Because advertising's role is generally an attempt to influence its target audience, playing upon their attitudes, judgements and actions so they favour whoever is broadcasting the advertisement (not necessarily the creator), it becomes clear that political advertising is pursuing a similar intention. However, persuading whomever the advertisement seeks to influence and then

influencing them is meant here to be in the sense of how a political party broadcasts its platform. Unlike commercial advertisements, political parties have no desire to sell a product, but rather they are seeking to gain sympathies and win votes. Similarly, language and the frequently expressive nature of its use have to be seen through this prism as a strategic means of consciously persuading and influencing voters and their opinions. The function language fulfils here is informative and persuasive. Even though the function combines two sub-elements and, in certain situational contexts and even on posters the informative component may also stand out, it is precisely the objective of persuasion that the language seeks to realise, albeit often in a very sophisticated way.

In the run-up to an election campaign, political parties have ample scope to consider any effective means of persuasion. Therefore, the choice of how to verbally render shared content also takes place (not only) as election campaign posters and flyers are structured consciously and intentionally. Selecting language units and connecting them with others into more comprehensive units, or in some cases half-sentence and sentence constructions, narrows their potential as expressions. At the level of setting up language units in situational contexts, their specific meaning is updated. Notwithstanding, this step is quite critical and reflects upon the speaker's (and also the broadcaster's and creator's) intentions, too. The use of language in communication, all the more so politically, requires looking not only at how verbally rendered content was broadcast, but always at how the broadcaster had conceived it. As an example, the targeted use of a pejorative expression may reflect the broadcaster's negative attitude (e.g. concern, fear, aversion and loathing) toward something or somebody, although it may accordingly be a signal or an appeal to the target audience also to contemplate their own attitudes toward the broadcaster.

Flag Words, Stigmatising Words and Expressive Language

Taking the above into account in analysing the verbal patterns of content shared in election posters and leaflets, the focus is mainly on those language units falling into the political lexicon category referred to as "ideological vocabulary", namely flag and stigmatizing words (Dieckmann, 2005; Girth, 2015, p. 59-65; Niehr, 2017, p. 150 et seq.). Flag words are positively connotated expressions that reflect either directly or symbolically the values professed by the party on its ideological background (Girth, 2015, p. 63 et seq.). Political parties utilise them to share or defend their positions among the people they are addressing. Standing in opposition to them are negatively connotated stigmatising words. Their job is to cause harm or damage to an enemy (Girth, 2015, p. 64). Like the party's flag words, stigmatising words are expressions that constitute a political party's attitude, but their primary function is to verbally mould the enemy's contradictory position on a certain issue. In both cases, their use is carefully thought out in order to achieve the intended effect.

Besides these units, the study also notes such language units that fall under general vocabulary, but were semantically "charged" during the election campaign and thus acquired a new meaning (expanding the semantic structure) and possibly an evaluative element, although it is often bound only to a specific context.

The prerequisite for successful advertising is for the advertisement to be singular, imaginative and provocative. These are attributes also found in connection with the expressiveness of speech. Expressive speech likewise shows elements that catch the eye or ear, are crisp and lean toward extravagance. Examining the analysed empirical material, not only can certain terms be expressive, such as inherent, adherent, contextual expressiveness (Findra, 2004;

Zima, 1961), but the sentence constructions are also unusually structured. If the analysis identifies expressive words that require attention, a specific example will be used to draw attention to them.

The 2019 National Council Elections – Analysing Election Posters and Leaflets

It is typical for the right-wing populist FPÖ to be extremely active on social networks, intensively spreading and promoting the values it professes. It also responds regularly to complaints from its adversaries from various ranks. In both cases, the party shares its attitudes, albeit through different linguistic means and with different and otherwise partial intents. Due to the nature of these resources and the purpose behind sharing them, only a minimum number of neutral posters and leaflets are ever designed.

The entire database of empirical material can be divided into two groups:

1. Party ideology exclusively represented by the party's verbal and verbal-visual patterns in its posters and brochures, referred to hereafter as contributions). There is no mention of an opposition and the presence of flag words and other positively connotated language draws in this case accordingly a positive connotation;
2. The party's attitude, shared through its verbal and verbal-visual patterns in its posters and brochures and nevertheless against the background of disparaging its opponents, is evident in the presence of stigmatising words and other negatively connotated language.

Both groups can be broken down further by thematisation. The next step is to state their preferences. If they cover the same areas and events, they will be exemplified by comparison.

One of the first pieces of information the FPÖ shared on its official Facebook account, shortly after the Ibiza Affair became a media sensation, was the conclusions the party's highest ranks had drawn therefrom and the lessons they had learned. Heinz-Christian Strach was swiftly replaced in the party's top post by Norbert Hofer. To be the face of the party externally, it was critical for whomever the party chose to be able not only to represent it, but also to defend the interests of "ordinary people". Figure 2 expresses this point in the slogan *Norbert Hofer also neuer FPÖ-Obmann einstimmig designiert!* ('Norbert Hofer unanimously named new FPÖ Chairman!'), making it clear to readers that Norbert Hofer's election had been endorsed by all of the party's members. Simultaneously, it signals cohesion within the party and tells those outside the party that Mr Hofer is a trustworthy person who will not disappoint them. The verbal rendering of the transmitted signal shows no exceptional elements of conspicuousness. Its sentence construction elides the auxiliary verb to make the combination "*einstimmig designiert*" stand out. In the relevant situational context, the intention behind this combination is to give the impression of a positive result, with the party guaranteeing that it will continue to uphold the values it professes.



Figure 2



Figure 3



Figure 4

Figures 3 and 4 show other contributions the party shared over the same period, all of which refer to what happened after the Ibiza Affair. The resignations of top coalition leaders, the fall of the government and the naming of a caretaker government understandably brought tensions between the former coalition partners to a boil, at least initially. The behaviour of the ÖVP, the FPÖ's former coalition partner in the government, and its leader Sebastian Kurz was also thematised (Figure 4) and the choice of language evident in both Figures 3 and 4 show much more creativity. In both examples, the word "*Macht*" (in English, 'might' in the meaning of great power or force) appears either alone or as part of composites as a stigmatising expression. The compound word "*Machtbesoffenheit*" ('drunk on power') shown in Figure 3 is in itself a derogatory expression that depicts the ÖVP's own approach to the Ibiza Affair in conjunction with the adjectives "*kalte und nüchterne Machtbesoffenheit*" ('cold and callously drunk with power' – in a sense drunk and sober at the same time) to intensify the power of the word *Machtbesoffenheit*. Figure 4 is similarly directed, where again another stigmatising expression "*Machtrausch*" is used, an untranslatable German word that describes somebody so intoxicated with power that they have absolutely no desire to give it up. Fulfilling the function of dramatising the shared content is the rhetorical question "*Ist das Demokratie?*" ('Is this democracy?'). The ideologically polysemic expression "*Demokratie*" is contrasted to the expression "*Machtrausch*", whose meaning denies governance in the spirit of democracy. The appeal "*Macht Euch selbst ein Bild...*" (Picture this yourself...) and the simultaneously following points of contention call upon the reader not to support such a government.

Other Facebook postings cast both the party's political rivals and supranational institutions as the "enemy". Even while several different thematically and verbally interesting relationships can be singled out, the issue of immigrants still proves to be one of the dominant topics, if not the most dominant. Figures 5-10 are exemplifying contributions, with the FPÖ strategically polarising attitudes, highlighting its own thoughts and those dividing the parties in Figures 5 and 6. Standing on one side is the flag word "*Grenzschützer*" ('border guards' or anybody protecting borders), accompanied by an attribute in the form of an adjective representing the party's traditional colour blue. But it could be very well replaced with the expression "*Heimatschützer*" ('homeland guards' or anybody protecting the homeland) in contrasting opposition to the stigmatising word "*Grenzöffner*" (anybody seeking to open the borders), again accompanied by the colours associated with the ÖVP (black) and the Green Party. This now produces a conflict of opinions about immigration and refugees. While the FPÖ wishes to protect Austria and its borders against "outsiders", the black-green coalition is portrayed as willing to allow immigrants into the country. Figure 6 contrasts the two parties' own political activities, with the FPÖ seeking bills to prevent illegal migration, with the two words becoming a stigmatising expression, while the ÖVP fights against plastic bags (*Plastiksackerl*). Interestingly enough, despite climate policy having become the leitmotif in the early elections, which could have been reflected in the battle against plastic bags, the FPÖ decided here to gamble on the persisting relevance of the refugee issue. Figures 7-10 exhibit verbally the approach taken by the opposing parties toward the refugee issue to the exclusion of everything else. Figure 7 "*Schwarz-Grün oder Schwarz-Rot bedeutet eine Aufweichung der Migrationspolitik!*" ('Black-green or red-green means softening the migration policy!') is a stigmatising expression because the FPÖ is calling for compliance with the current rules governing refugees, if not to tighten them further, while Figure 8's "*Es geht schon los... Grünen-Politiker verlangt Abschiebestopp, Bei der Forderung mit dabei: SPÖ & NEOS*" ('Green politicians demand a stop to deportations, with both SPÖ & NEOS going along with them.') In this case, *Abschiebestopp* becomes the stigmatising code word because the FPÖ is calling for the expulsion of refugees that do not meet the requirements for legal migration.

Meanwhile, the statement “*SCHWARZ-GRÜN steht für Einwanderung und Asylmissbrauch*” (‘Black-green stands for immigration and asylum abuse’- Figure 9) stigmatises both the words “*Einwanderung*” and “*Asylmissbrauch*” because the party is combating immigration and yet accepts asylum if applicable legal conditions are met. Figure 10 points the finger indirectly at the influx of refugees into the country as the main culprit, specifically with the stigmatising word “*Zwangverteilung*” (‘forced distribution’). Here, the party formally and verbally expresses its disagreement, demanding “*Schluss mit der Zwangverteilung von Migranten!*”



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10

The refugee crisis in general and illegal migration in particular is often thematised in the values the FPÖ espouses. Figures 11-17 exemplify the issue’s various partial aspects. The emphasis in Figure 11 is on the word “*Schutz*” (‘shelter’), a flag word relative to one’s own country that embodies a defensive attitude toward it as a homeland, territory, population and culture. Generally, the word has an inherently positive connotation. In this example, however, the word takes on the double meaning of Austria sheltering refugees and sheltering Austria from refugees in the sentence “*Da kommen Menschen nach Österreich und wollen Schutz und dann müssen wir vor ihnen geschützt werden!*” (‘People are flooding into Austria and they want to be sheltered and then we have to shelter ourselves against them!’). There are no pejorative expressions verbally stating the negative consequences of Austria’s migration policy. Only ordinary vocabulary is used. Nonetheless, it puts their position aptly into context. Refugees – THEY WANT TO BE SHELTERED from us, but WE HAVE to be SHELTERED from THEM. The modal verbs “*wollen*” (want) and “*müssen*” (must) emphatically contrast “*desire*” and “*necessity*”, which are themselves two entirely different positions to take.

Figures 12 and 13 have a broadly interpretive framework. On one side, the expressions “*Kriminellen Schlepperbanden muss ihr schmutziges Handwerk konsequent unterbunden werden!*” (‘Criminal human-trafficking gangs must be uncompromisingly kept from carrying out their dirty work!’) in Figure 12 and “*Wir brauchen einen richtigen Grenzzaun, kein Hasengitter!*” (‘We need a true border fence, not chicken wire’) in Figure 13 can be understood as a statement of necessity (something that has to be stopped – *müssen*) as opposed to something that needs to be stopped – *brauchen*), yet on the other hand a statement

in the sense of “We should do this, this is our position respecting your concerns, fears and desires!” likewise can be an appeal to the government, even though nothing or no one has ever been specifically named. Both examples signal the occurrence of explicit expressions with inherently and adherently negative connotations, such as “*kriminelle Schlepperbanden*”, “*ihr schmutziges Handwerk*” in Figure 12 and the contrast between “*Grenzzaun*” and “*Hasengitter*”. The expressions in Figure 13 stigmatise, while “*Grenzzaun*” is a flag word.

Figures 14 and 15 zoom in on the refugees’ religious belief as another thematic aspect. Although the party’s portrayal of its rejection of Islam is relatively peaceful, it nevertheless seeks to add the political perception of the religion. Clearly in the foreground are the expressions “*Kultur*” (culture) and “*Geschichte*” (history), which even minus the frequent association with the possessive pronouns “mine/ours” become flag words that express the party’s patriotic feeling. Islam’s position is defined quite clearly in Figure 14 with “Islam” itself a stigmatising word: “*Der Islam ist kein Teil unserer Kultur, kein Teil unserer Geschichte und wird das auch niemals sein!*” (‘Islam is not part of our culture, nor of our history, and it never will be!’). Figure 15 indeed stigmatises it with the German translation of the Salafist doctrine in Sunni Islam, which the party categorically rejects.

The code word is the burqa, associated with the ideology of political Islam. Like Islam, its features of any nature are rejected by the FPÖ. Special attention is paid to girls and women wearing burqas in schools and school facilities, with the party constantly sharing during the 2019 election campaign the country’s burqa ban and even advocating an extension of its scope in Figure 16: *Kopftuchverbot an Schulen erweitern!* (‘No headscarves in schools!’). The poster advocates banning children above 14 and teachers from wearing them. The expression “*Kopftuchverbot*”, indicating a ban on wearing burqas and headscarves, is the flag word here and expresses the party’s attitude toward eliminating as many elements of political Islam as possible.

Figure 17 illustrates the immigration issue’s relevance and perhaps even indirectly justifies to some extent the dominant sharing of its various aspects. Here, the FPÖ refers to an EU Commission study pointing out that Europeans are more concerned about immigration than climate change. Asking the question “*Du auch?*” (‘You, too?’) seeks to draw reader attention toward the former.



Figure 11



Figure 12



Figure 13



Figure 14



Figure 15



Figure 16



Figure 17

In spite of the change in the 2019 election campaign's major issue, which as earlier mentioned had turned toward climate policy, there were relatively few posters or leaflets about it from the FPÖ. But the example below pointing out the position of its political adversaries illustrates the contradiction between the party's values and its actions. From the verbal perspective, it can be characterised as a statement without much hint of expression – “*Grüne sind die Vielflieger im Bundestag...*” (‘The Greens have many frequent fliers in the Federal Council’), but from the point of view of sharing intentions, it adds considerable illocutionary force.



Figure 18

When talking about the Green Party's ideology, Figure 19 transforms the perception of conservation – protecting nature – to protecting the homeland with the slogan “*Naturschutz ist Heimatschutz!*” (‘Protecting nature is protecting the homeland!’). Besides turning “*Naturschutz*” and “*Heimatschutz*” into flag words, they also express the FPÖ's patriotism. Similarly, Figure 20 appeals to everybody's obligation to protect Austria's environment “*Es ist unsere Pflicht, alles dafür zu tun, damit Österreich das Land bleibt, das wir alle kennen und lieben!*” (‘It is our duty to do everything we can to ensure Austria remains the country we all know and love!’). In this example, Austria embodies the homeland, “our own” country and fulfils the role of a flag word.



Figure 19



Figure 20

In order for a political party to present and represent its ideology effectively, it ordinarily opts solely for positively connotated expressions, whether they are flag words or also semantically, positively charged attributes. Figures 21-29 have flag words on their election posters and flyers stating their intentions. These include the words *fair/Fairness* (in the English language meaning of “honest” and “impartial”), *heimatreu/Heimattreue* (in this context, loyalty to one’s home or homeland), *Sicherheit (der Heimat)* (a secure home, a safe country), *Österreich* (Austria), *Zusammenhalt* (cohesion), *zusammenhalten* (closing ranks, sticking together), *Familie* (family), *patriotisches Österreich* (patriotic Austria), *Patriotismus* (patriotism), *Herz* (heart) *Schutz* (shelter or protection), *Werte* (value or worth), *Zukunft* (future), *unser(e)* (our, ours), *Leidenschaft* (passion, zeal). These flag words are found in other posters and leaflets because they form the central elements of the FPÖ’s political and ideological orientation.



Figure 21



Figure 22



Figure 23



Figure 24



Figure 25



Figure 26



Figure 27



Figure 28



Figure 29

Conclusion

This paper discusses verbal patterns found in the FPÖ’s 2019 election campaign, which was held in the backdrop of an early election called in the wake of the so-called “Ibiza Affair”. The parties grappled in the campaign with an altered electoral landscape, one that had become more focused on policies to combat climate change. Based on this development, it was also expected for the FPÖ to focus its campaign more widely on the relevant aspects of climate policy. But an analysis of empirical material showed that, in spite of having accepted that the election would turn on the climate change issue, it was still not the dominant element in the party’s campaign. Like in recent election campaigns, the FPÖ still tended most frequently to thematise aspects of the immigration crisis.

Overall, the election campaign led by the FPÖ's new chairman, Norbert Hofer, could be described as relatively peaceful, especially when compared to the rhetoric experienced in recent elections contested with its former charismatic leader, Heinz-Christian Strach (Fraštková, 2020; 2019). In this quieter campaign environment, the party endeavoured to underscore its feelings and attitudes, define itself against its opponents in opinions and discredit its adversaries in a targeted manner. The choice of language was tailored to these sub-intentions. Its self-presentation was dominated in the empirical material by the presence of flag words highlighting the party's patriotic feeling and its sense of justice, fairness and social sensitivity (*fair, heimatreu, Sicherheit, Österreich, Zusammenhalt, Familie, patriotisches Österreich, Patriotismus, Herz, Schutz, Naturschutz, Werte, Zukunft, unser(e), Leidenschaft, Gerechtigkeit, Grenzzaun, Gerechtigkeit, sozial*), with polarising opinions reflected in flag words such as *Grenzschützer, Grenzzaun* and *Kopftuchverbot* and stigmatising expressions like *Grenzöffner, illegal Migration, Abschiebestopp, Aufweichung der illegalen Migration, (politischer) Islam, Salafismus* and *Zuwanderung*, which were often used to contrast *Grenzschützer* to *Grenzöffner* and extremely imaginative words commonly selected to discredit the opposition (*kalte und nüchterne Machtbesoffenheit, Machtrausch, Kurz-Fest* and more).

Examining both the lexical and syntactic subsystems of the language used, a summary can be made of the tendencies that were visible in the FPÖ's campaign. There was a high degree of single-noun sentences whose base was both verbal (indefinite verbs) and nonverbal (especially nouns). Slogans appeared in the imperative mood or as desires, alongside interrogative sentences, asking of rhetorical questions and deliberately contrastive words.

The choice of language is understandably related to the type of text and resources from the election campaign, with election posters and leaflets being the only, yet most effective means. It remains to be considered whether the minimal focus on content during the campaign may have varied or at last partially deviated had other types of empirical material been taken into account. Compared to previous election campaigns and with respect to the type of empirical material studied, so far there has been evidence of a similar strategy having been chosen.

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Contact email: simona.frastikova@gmail.com
jdemcisak@gmail.com

Trilingual Preschool Children's Cognitive Understanding of Mouth Action Verbs in Chinese, English and Malay

Hui Jie Yap, Nanyang Technological University, Singapore
Helena Hong Gao, Nanyang Technological University, Singapore

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Abstract

This paper examines how Malaysian Chinese trilingual preschool children used their linguistic and cognitive knowledge to associate the actions depicted by eating and drinking verbs with various types of food. Eight commonly used Chinese eating and drinking verbs (吃 “eat”, 喝 “drink”, 咬 “bite”, 吸 “suck”, 嚼 “chew”, 吞 “swallow”, 啃 “nibble”, 舔 “lick”) were selected as target verbs and tested 80 preschool children aged between 5 and 6 (Mean: 5.92) from Malaysia. The results show that the extent to which the children understood and used the verbs and other related words reflected their life experience and cognitive understanding of the physical eating and drinking actions in relation to the types of food. It was also found that the children's cognitive skills and language proficiencies in the three languages were closely related to their family background and sociolinguistic environment. The results of the study, though limited to trilingual children in Malaysia, can be viewed as a reflection of the general trend of trilingual development in children and may serve as a reference for educators and parents in their teaching and parenting trilingual children.

Keywords: Eating Verb, Drinking Verb, Child Language Acquisition, Cognitive Development, Trilingualism, Chinese, English, Malay

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Introduction

Malaysia is a multi-ethnic, multi-cultural and multilingual society, with Malays, Chinese and Indians making up the majority of its population. According to the Department of Statistics Malaysia, the country's population in 2020 is estimated at 32.7 million, which comprises of 29.7 million (90.8%) citizens and 3.0 million (9.2%) non-citizens. Among all the ethnic groups in Malaysia, the Chinese is the second largest. The majority of the Malaysian Chinese descended from those provinces in the south east coast of Mainland China, such as Fujian, Guangdong, and Hainan provinces. As the national and official working language of Malaysia, Malay is a compulsory subject in schools. As a foreign language, English is also a compulsory subject in schools. Both languages serve as common languages of different ethnic groups to communicate with each other. Apart from its dialects, such as Hokkien, Cantonese, Hakka, Teo Chew, and Hainanese, Mandarin Chinese is vigorously promoted by and widely spoken by the members of the Chinese community. Their common goal is to make Mandarin Chinese the medium of instruction in schools.

With the great effort of the Chinese community for more than half a century, Malaysia now has the most complete Chinese education system other than Mainland China, Hong Kong, Macau, and Taiwan. According to the Ministry of Education Malaysia, as of 2021, Malaysia has 1,298 National Type (Chinese) primary schools¹ and 60 Chinese Independent Secondary Schools. Malaysian Chinese parents normally send their children to Chinese-medium primary schools, which provide five to six hours of Chinese lessons per week. After completing primary education, students from National Type (Chinese) primary schools may attend Malay-medium National secondary schools, National Type secondary schools, or Chinese Independent Secondary Schools. The differences between National and National Type secondary schools are that the latter comprises of mostly Chinese students who receive 2.5 to 3.3 hours of Chinese lessons per week, while the former have fewer Chinese students and Chinese is an elective subject with a 2-hour lesson per week. Chinese-medium Chinese Independent Secondary Schools² emphasize mother tongue education and provide students 5 hours of Chinese lessons per week, while they also learn Malay and English.

Pre-schooling is not obligatory in Malaysia and the curriculum of preschools is unstandardized. The curriculums of those MOE preschools can be different from those of other private agencies. On average, children spend 4 hours per day in preschools. Deducting the time periods for science, mathematics, and aesthetics subjects, children are left with very little time learning language subjects. Hence, the language learning of preschoolers mainly rely on the language environment in their daily life, such as interactions with family members at home or teachers and peers at school. This type of bilingual and multilingual learning is typical among all ethnical communities in the multilingual society of Malaysia. Such a multilingual environment can be advantageous for young children if their learning is mostly through the “acquired system” but not the “learned system” (Krashen, 1987). However, with the pressure for early development of multilingual skills, parent and kindergarten reenforced formal learning of three languages has become common among Malaysian children before school age. What factors are involved in trilingual development in preschool children and

¹ Primary schools in Malaysia are divided into two types: National School and National Type School (vernacular schools). The former uses Malay and the latter uses either Chinese or Tamil as the medium of instruction. The curricula used are standardized by the Ministry of Education (MOE), with Malay and English provided as compulsory subjects in all schools.

² Chinese Independent Schools are funded by the Malaysian Chinese communities. There is a total of 60 Chinese Independent Schools in different states of Malaysia.

whether their use of commonly used words in daily life in the three languages show any positive language transfer or difficulties due to language interference are the questions worth the effort to find out answers to. This study recruited 80 Chinese dominated trilingual children in Malaysia and tested their use of 8 drinking and eating verbs in Mandarin Chinese, English and Malay with a picture-elicitation method. Our objectives were to examine the differences in the children's performance in their first (Mandarin Chinese), second (English), and third (Malay) languages, and to identify the factors that might have affected their mastery of their first language and competence in their second and third languages.

1. Studies on Children's Use of Action Verbs

Before children were able to utter meaningful sentences, they must have acquired the words that could build up the sentences. But how children learn to speak a language has been a research question that has been answered many times and in many ways. According to Moskowitz (1978), "it seems that they do so in a highly methodical way: they break the language down into its simplest parts and develop the rules they need to put the parts together" (p. 131). To follow this assumption, we tend to believe that one of the most important parts within a sentence is the verb structure, or the lexical meaning of the verb, which can be an indicator for measuring children's language development. For example, the verb island hypothesis (Tomasello, 1992) proposed that the verb-specific predicate structures are acquired by children through their understanding of the functions of the verb and its related nouns. That is the "functionally based distributional analysis" (Tomasello, 1992, p.28) of the language children are exposed to starts from verb structures.

Studies on the early verb use by children show that by the age of 2 children start to produce more varieties of verbs and most of them are action verbs (Mu, & Deng, 2009). This accords with the findings in Gao's (2001, 2015) studies on children's production of physical action verbs (PA verbs). The types of PA verbs produced by the Chinese, English and Swedish children in her studies include verbs of different body part actions, such as looking, eating, drinking, licking, kissing, carrying, taking, kicking, etc. Among children's early productions, drinking and eating verbs are found.

Kong et al. (2004)'s investigation on 1- to 5-year-old Chinese children's notional words acquisition found that there were 334 action verbs in 408 verbs produced, among which 吃 "eat" and 喝 "drink" were first produced between the age of 1;0 and 1;2. 咬 "bite" was produced at 2;0 and 啃 "nibble" after 3;6. Gao (2001)'s study on Chinese, English and Swedish children found that Chinese children produced 咬 "bite" at 1;9.21, English children produced *lick* and *bite* at 1;7.0 and 1;11.0 respectively and Swedish children produced *bite* "bite" and *slicka* "lick" at 1;11.17 and 2;3.3 respectively. The children in these studies produced the words at around the same age and they were used in similar contexts. This shows that children are able to use more difficult mouth actions, besides *eat* and *drink* after 1.5 years old.

Language development in bilingual or multilingual children similar to that in monolingual children to some certain extent, but more complex. For example, the proficiency of one language is faster than the other or another, which means one of the two or three languages become dominant (Yip, 2006). Smith (1931, 1935) was the first who studied on English-Chinese bilingual development. The results of the study revealed that the size of the English vocabulary of the bilingual children was smaller than that of monolingual children of the same age and language mixing occurred often. Sinologist Timothy Light (1977)'s study on

his daughter who was born to a Cantonese-speaking environment till moving to the United States at 16 months old revealed that language environment affects bilingual development in young children at all levels.

Singapore and Malaysia are both multilingual societies. Children learnt a second and even a third language before entering preschools. Studies on bilingual development in preschool children were conducted in the Bilingual Development Lab, Nanyang Technological University. These studies were mostly on language and cognitive development in bilingual children with the impacts of various social factors (e.g., Pua, 2016; Wang, 2014; Low, 2014). For example, Low (2014) examined word production of trilingual (Chinese, English and Malay) Malaysian Chinese children aged 3-5 and found imbalance in their trilingual development due to their language environment and other social factors. Chin & Gao (2014)'s study on the use of 拿 “take” action verbs by Chinese Malaysian high school students showed that the Chinese speaking bilingual school children had certain preference in their word use and their Chinese vocabulary development was affected by other languages.

Studies on language development in trilingual children are not many. Hence, this study explored trilingual word use by children aged 5-6 in Malaysia. The focus was on the use of eating and drinking verbs in Chinese, English and Malay. Previous studies on eating and drinking verbs with a comparative approach mostly involve only two languages and they are more theoretical than empirical (e.g., Yang, 2007; Sun, 2013; Zhang & Wei, 2013; Jia & Wu, 2017).

2. Methodology

2.1. Participants

80 preschoolers aged between 5;0.4 and 6;10.4 (Mean: 5.92) were recruited from Malaysia (See Table 1) for the study.

Participants	Boys	Girls	Total	Mean Age
5 Years Old	21	22	43	5.55
6 Years Old	19	18	37	6.29
	40	40	80	5.92

Table 1. An Overview of Trilingual Participants

The children were from middle class native Malaysian Chinese families, enrolled in preschools in Malaysia. Their mother tongue is Chinese and their English and Malay were simultaneously learned. Most of their English and Malay language proficiencies are lower than their Chinese. They attended mainly Chinese-medium preschools. On average, they spent four hours per day in preschools and each of the language subject lessons was about one hour per day.

2.2. Eating and Drinking Verbs in Chinese, English and Malay

Based on Gao (2001)'s classification of mouth actions verbs, a total of eight eating and drinking verbs (*eat, drink, bite, suck, chew, swallow, nibble, lick*) commonly used in children's daily life were selected for this study. Table 2 shows the meanings and examples of these words in the “Modern Chinese Dictionary (7th Edition)”:

Chinese	吃	喝	咬	吸	嚼	吞	啃	舔
Dictionary Definition	把食物等放到嘴里经过咀嚼咽下(包括吸、喝)。	把液体或流食咽下去。	上下牙齿用对着(大多为了夹物体或使物体的一部分从整体分离)。	物体把液体、气体等引入体内。	上下牙齿磨碎食物。	不嚼或不细阳个幽或成块地咽下去。	一点儿一点儿地往下咬。	到用舌头接触东西或取东西。
Example	吃饭, 吃奶, 吃药	喝水, 喝茶, 喝酒, 喝粥	咬紧牙关, 用嘴咬住绳子, 让蛇咬了一口, 咬了一口苹果	呼吸, 吸烟, 吸毒, 吸奶汁, 深深地吸了一口气	细嚼慢咽, 肉没有烧熟, 嚼不烂	囫囵吞枣, 狼吞虎咽, 把丸药吞下去	啃骨头, 啃老玉米	舔盘子, 猫舔爪子
English	Eat	Drink	Bite	Suck	Chew	Swallow	Nibble	Lick
Dictionary Definition	To put food in your mouth, bite it and swallow it.	To take liquid into your mouth and then down your throat into your stomach.	To use your teeth to cut into or through something.	To take liquid, air, etc. into your mouth by using the muscles of your lips.	To bite food into small pieces in your mouth with your teeth to make it easier to	To make food, drink, etc. go down your throat into your stomach.	To eat something by taking small bites.	To move your tongue across something.

					swallow.			
Example	Who ate all the biscuits?	We sat drinking coffee and chatting for hours.	He picked up the bread and bit into it hungrily.	She was noisily sucking up milk through a straw.	He is always chewing gum.	It's easier to swallow pills if you take them with water.	The bread had been nibbled by mice.	The child licked the spoon clean.
Malay	Makan	Minum	Menggigit	Menyedut	Mengunyah	Menelan	Mengunggis	Menjilat
Dictionary Definition	Memamahserta menelanan makan, mengunyah (menelan, melulur, menghisap, dll) sesuatu.	Meneguk atau menelanusuatu yang cair.	Mengapit (mengacip, menyepit, dsb) dengan gigi.	Menarik masuk (ke dalam) dengan kekuatan udara (dengan mulut, hidung, dll), menghirup, menghisap.	Melumatkan (menghancurkan) makanan dalam mulut dengan gigi sebelum menelannya, memamah.	Memasukkan (makanan dll) ke dalam perut melalui kerongkong.	Menggigit sedikit-sedikit, mengering, mengering.	Merasa (mengambil) makanan dll dengan lidah.
Example	Jemputlah makan kuih ini.	Minum air, susu, dll.	Kaki pencuri itu digigit anjing.	Dia mengesat-ngebat air matamata dengan mengyedut air yang keluar dari hidungnya.	Tangan ku menyuap nasi lagi, mulut ku mengunyah perlahan-lahan.	Makanan itu pun dikunyahnya, kemudian barulah ditelannya.	Tikus itu mengunggis roti yang ditinggalkan di atas meja.	Susu yang tumpah itu habis dijilat kucing.

Table 2. Eating and Drinking Verbs in Chinese, English and Malay

The definitions of the verbs are from *Xiandai Hanyu Cidian* “Modern Chinese Dictionary”, 7th Edition, Oxford Learner’s Dictionaries, and *Kamus Dewan*, the Fourth Edition. They are all rather simple but we assume that children acquired the words in the three languages through real life experience rather than formal learning.

2.3. Data Collection Methods

Two methods were used for the data collection: A questionnaire completed by the children’s parents and an experiment conducted with the 80 children. The parents’ responses and children’s performances were coded and analyzed afterwards.

- Questionnaire

“Parent Report Form for the Studies of Lexical Development in Bilingual Children in Singapore” designed by Gao (2015) was used for parents to provide demographic and other relevant information of their children (e.g. family background, language(s) spoken at home, family activities, etc.)

- Experiment

The physical actions depicted by the abovementioned eight eating and drinking verbs matched with 30 kinds of food were prepared in pictures or video clips as visual stimuli for the experiment. As shown in Table 3, each action shown in pictures or video clips was matched with at least six kinds of food or drink that included (1) correct match of action and food, (2) incorrect match of action and food (marked with “*”), and (3) controversial match of action and food (marked with “?”). The controversial match of action and food refers to the action that can be applied to the food in terms of function, but merely found in reality (e.g. drink oil, lick milk, etc.).

Visual Stimuli for Teaching	Visual Stimuli for Experiment					
eating rice	noodles	chocolate	pill	porridge*	orange*	
drinking water	orange juice	porridge	oil?	ice-cream*	egg*	
biting apple	chicken drumstick	grapes?	chili?	rice*	pill*	
“sucking” milk	orange juice	noodles	oil?	jelly?	sausage*	
chewing	peanut	rice	tofu	ice?	cotton candy*	
swallow	pill	tangyuan?	grapes?	fishball?	jelly?	hamburger*
“nibbling” corn	bread	apple	durian	lollipop?	pill*	
licking ice-cream	lollipop	cake?	ice?	milk?	potato*	

Table 3. Visual Stimuli – Action and Food/Drink Combination

The visual stimuli were shown to the children individually, following with relevant questions.

Before the experiment, parents of the recruited children were briefed the details of the study and signed the consent forms for their children's participation and for them to be video- or audio-recorded during the testing. The experimenter started with a warm-up session with the children individually and told them that they would be invited to play a game in which there were no right or wrong answers to the questions and they could take a break or end the game at any time they wanted to. Then the experiment started with the following procedures in Chinese which is the mother tongue of all the participants:

Part 1:

Experimenter: *Can you tell me what this is in Chinese/English/Malay?* (Experimenter pointing at the pictures of food.)

Child: *Mifan/Rice/Nasi.* (or, *I don't know.*)

Part 2:

Experimenter: *Please take a look at this picture/video. Can you tell me what he/she is doing?* (Experimenter pointing at the picture/ video.)

Child: *He/She is drinking* (or any other verbs in Table 3) *water* (or any other food in Table 3).

Experimenter: *Yes, this action is "drink" (verb). Can you remember this action? This action is "drink".*

Child: *Yes.*

Part 3:

Experimenter: *Please take a look at this picture/video* (a glass of orange juice or any other food in Table 3). *Can you tell me what this is?*

Child: *It is orange juice.*

Experimenter: *Can we apply that action to orange juice?*

Child: *Yes* (or *No*).

Experimenter: *How do we say that in Chinese?* (if the child answers *Yes* to the above question)

Child: *Drink orange juice* (or any other eating or drinking verb + food/drink)

Experimenter: *Can you tell me why?* (if the child answers *No*)

Child: *Because*

The experiment ended after all the pictures (action (verb) + food/drink (noun)) were asked, which lasted about 30 minutes.

3. Results and Discussion

Children's responses in Chinese collected from the experiment were transcribed and children's answers were coded in "V+N" format which represents a verb phrase. A point scale with 30 as the maximum was used to quantify the children's answers. Each correct V+N match is worth one point. A correct match with an incorrect use of a word is given half point. A wrong match has zero point.

In the data analysis, we assumed that a child understood the meaning and usage of a verb if he or she uttered it and used it in a correct V+N structure.

We analysed the data in two ways: the naming rate and the application rate. The naming rate refers to the rate of the target verbs that the children used in response to the experimenter's first question. The results are shown in Figure 1 and Table 4. The application rate refers to

the rate of the verb phrases (V+N structure) that the children produced. The results of this type are shown in Figure 2.

3.1. Naming Rate

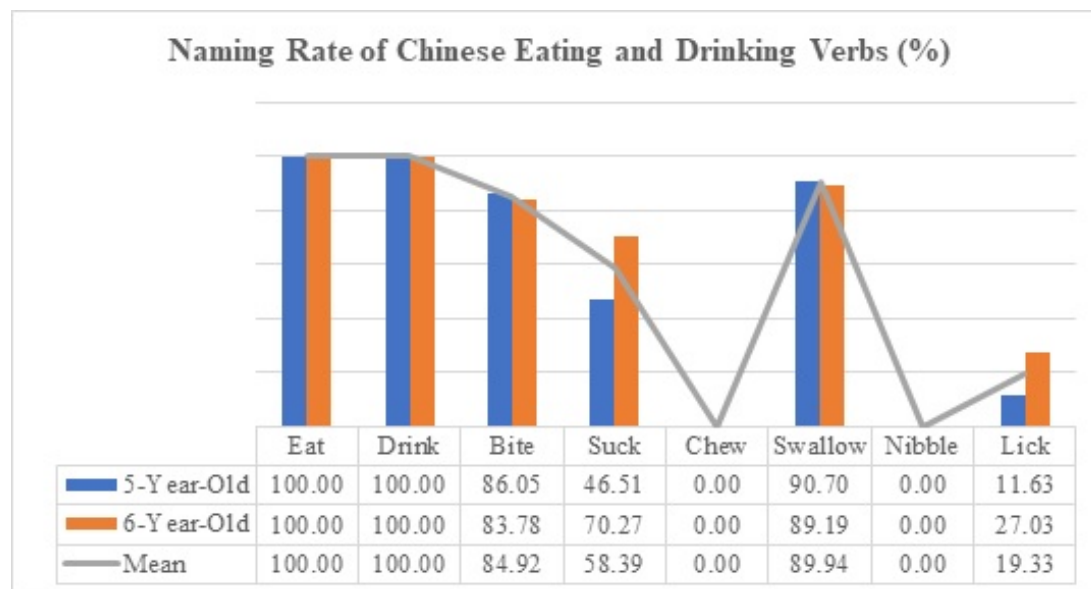


Figure 1: Naming Rate of Chinese Eating and Drinking Verbs (%)

Chinese Eating and Drinking Verbs	Number of Children who Produced the Word	Percentage (%)
吃“eat”	80	100
喝“drink”	80	100
咬“bite”	68	85
吸“suck”	46	58
嚼“chew”	0	0
吞“swallow”	72	90
啃“nibble”	0	0
舔“lick”	15	19

Table 4. Number of Children Who Produced the Target Verbs

As shown in Figure 1 and Table 4, both 吃“eat” and 喝“drink” were used by all children correctly. According to the framework of lexical typology, words related to eat and drink are basic words in all languages, as they express the basic human needs. Generally, basic words occurred early in a language as they are essential in daily communication since ancient times (Fu, 2004). Thus it is not surprising that all the children used the verbs 吃“eat” and 喝“drink” correctly.

The other six eating and drinking verbs 咬“bite”, 吸“suck”, 嚼“chew”, 吞“swallow”, 啃“nibble” and 舔“lick” were hyponyms of “eat” and “drink”. Hyponyms can be seen as the subclasses of a hypernym, conversely, a hypernym is the superclass of hyponyms (Liu, 2005). A hypernym describes a broader term, while a hyponym is a more specialised and specific

word (Fu, 2004). Hence, six of these eating and drinking verbs are more specialised verbs compared to “eat” and “drink”.

Children learn the most basic words early and more easily. The lexical expansion from basic words to specialised ones is usually age related. The results of this study show that the usage rate of the Chinese eating and drinking verbs produced by the children of the 6-year-old group was higher than that of the 5-year-old group. Cognitively, this can be explained by Piaget’s (1964) view that children’s production of words increase with more life experience.

As shown in the result, the usage rate of 舔“lick” was only 18.75% (15/80). Gao (2001)’s study found that English children produced the word *lick* as early as 1;7.0 and Swedish children produced the word *slika* “lick” as early as 2;3.3, but there was no use found of 舔“lick” by Chinese children before 2 years of age. It might be due to the difficulty in pronouncing the word with the consonant [t] that requires an aspirated stop followed by the vowel [ian] that is a nasal final. But the main reason might be that the action of licking is rarely seen. However, 嚼“chew”, the action that all children do after infancy was not used by any children. We can also assume that it was because of the difficulty in pronouncing the word but the fact might be that although we chew food every day, but it is a more specialised verb to describe the manner of eating, which is not commonly used in everyday life. No input, no output.

3.2 Application Rate

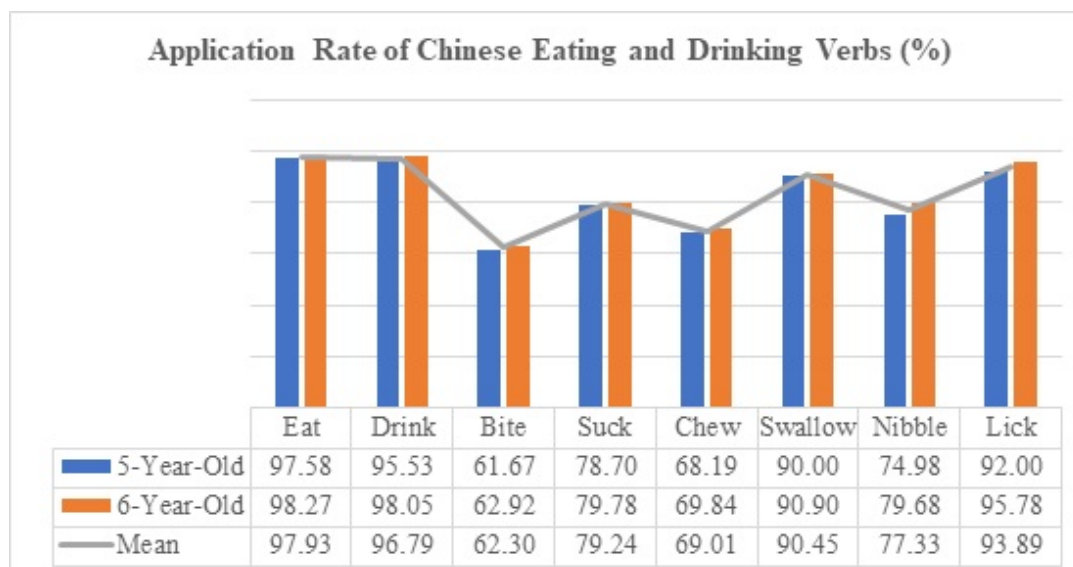


Figure 2: Application Rate of Chinese Eating and Drinking Verbs (%)

In Figure 2, eight eating and drinking verbs were sorted from the most frequently to the least frequently used words, from left to right, based on the “Dictionary of Modern Chinese Frequency”, but some of the results were unexpected. The application rate of the verbs by the children from the higher to the lower, was: eat (97.93%), drink (96.79%), lick (93.89%), swallow (90.45%), suck (79.24%), nibble (77.33%), chew (69.01%) and bite (62.30%).

In accordance with the naming rate, both 吃“eat” and 喝“drink” had the highest application rate, which was 97.93% and 96.79% respectively. This shows that these two basic words are

more general in meaning and have a wider range of usage as compared to other eating and drinking verbs. Children tend to acquire the basic word of a class of words first before they acquire other class members whose lexical meanings are more specialised (Gao, 2001).

The naming rate of both “lick” and “swallow” was low, but their application rate was as high as 93.89% and 90.45%. It might be due to the more specific meanings and features of the words. The meaning of *lick* is to move the tongue across the surface of something to get something and the meaning of *swallow* is to cause food to move from mouth into stomach without chewing. The actions depicted by the verbs are specific and easy to imitate and thus easy to apply once the children acquired the word meanings.

The application rate of 吸“suck” was 79.24%. 95% (76/80) of children failed the application of 吸“suck” to 面条 “noodles”. Most thought that one could only eat noodles but not sucking noodles. It is indeed true that people normally do not eat noodles by sucking but it doesn’t mean that functionally it is not possible. The children failed to take the cognitive perspective to understand the action depicted by the verb. It may also be due to language interference as the trilingual children acquired the English *suck* and the Malay *menyedut*. The sucking concept in the three languages may not be the same in the mapping to the lexical meaning. For example, eating Chinese noodles does involve certain manner of sucking, while eating Western noodles does not. The trilingual children’s judgment might have also been affected by the picture of a child drinking milk using a straw in one of the teaching pictures. They might have thought that a sucking action must be done using a straw and it could only be applied to liquid food. Preschool children are found to be more influenced by visual stimuli than linguistic input (Gao et al., 2014).

Overall, the application rate of target verbs among the 6-year-old children was higher than the 5-year-old children. This result was consistent with their vocabulary sizes of the three languages.

Conclusion

Eight Chinese eating and drinking verbs (吃 “eat”, 喝 “drink”, 咬 “bite”, 吸 “suck”, 嚼 “chew”, 吞 “swallow”, 啃 “nibble”, 舔 “lick”) were selected for the experiment conducted with Malaysian preschoolers aged 5-6 to investigate their cognitive understanding of word use and the characteristics of child trilingual acquisition with Chinese as the first language. The overall performance of the 6-year-old children was better than that of the 5-year-old in both the naming of the target verbs and the applications of the verbs with various types of food words. The results support Piaget (1964)’s theory of cognitive development that children’s language proficiency improves with more life experience.

Specifically, children’s early trilingual vocabularies reflected their life experience. In other words, children gained their language and cognitive skills through experience in life. Children’s perception and cognition for the understanding of human physical actions in relation to linguistic expressions are verified again to have achieved and conceptualized through imitation and experience. Using visual stimuli, we found that the children’s cognitive perspective and language use were heavily influenced by their language and social environment. The imbalanced language proficiency of the trilingual children in this study are found to be due to the influence of their home language, the medium of instructions in preschools, and the habitual code mixing of Chinese, Chinese dialects, English and Malay. It is worth to mention that code mixing is a common phenomenon in Malaysia.

The results of this study were insufficient to represent the whole of Malaysian children aged 5-6, but it reflected the general trend of trilingual development of children. We wish that this study may serve as a reference to educators and parents, as well as reference and basis to future studies related to children language development in Malaysia.

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Contact email: huijie0623@gmail.com
helenagao@ntu.edu.sg

The Features of Japanese EFL Learners' Peer Feedback in Written Compositions

Hiromi Martin, Komazawa University, Japan
Yoko Shirasu, Yokohama College of Commerce, Japan

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Abstract

This study investigated how corrective peer feedback between peers is related to Japanese university learners' noticing in their foreign language acquisition. In this research, 12 students written composition data was collected from the following three stages: (1) essay writing, (2) corrective feedback with peers and (3) self-revision. In the process of the peer feedback, the learners paid attention to the lexical, syntax and organization of their essay writing. The results indicated how the learners revised their errors in two forms: error correction and reformulation, and how they improved their essay writing after receiving peer comments. In addition, the findings showed the tendency of Japanese EFL learners' linguistic views with EFL writing instructions where and which points the learners noticed and revised their English compositions as an output process. The effects of the peer feedback caused the learners to recognize and uptake in their revised writing. On the other hand, the data pointed out that common grammatical, lexical and discourse errors remained, including the influence of Japanese EFL writing classes conducted in Japan. These results raise potential suggestions for further research of the corrective feedback with SLA instructions and writing activities in EFL classes.

Keywords: Corrective Feedback, Noticing, Peer Feedback

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Introduction

Feedback on EFL student writing has been shared in various ways. In Japan's current English education, the Ministry of Education, Culture, Sports, Science and Technology has emphasized four skills: speaking, writing, reading, and listening. These are key English communication tools in the 2020 revised Course of Study guidelines for elementary schools, 2021 junior high schools, and 2022 high schools. Traditionally, in English classes in Japan, teachers focused on grammar and vocabulary. Therefore, the Japanese entrance examinations for high school or university were conducted mainly based on reading and listening skills assessments, with multiple-choice tests to measure lexical and syntax knowledge. Although academic writing has become an important issue in Japanese language education, there has been almost no instruction in English writing in secondary schools (Miyata, 2002). Mainstream English writing in the classroom largely consists in writing single sentences; there is almost no paragraph-length writing practice.

Since high school EFL classes in Japan are often grammar-intensive, students have few opportunities to practice free or creative writing exercises and do not learn the process of writing a paragraph. As a result, they lack opportunities to receive writing feedback from classmates or instructors. However, the Ministry's curriculum reform suggested that English education in Japan should become more active, with students using more communication skills to achieve their output abilities, such as speaking and writing in the classroom. This research proposal focuses on how EFL instructors should approach teaching effective writing skills and provide students the chance to improve their writing in the process of interlanguage and error corrections from peer feedback based on the noticing hypothesis of Second Language Acquisition theories.

Previous Studies

1) Output and Noticing Hypothesis

In the output and noticing hypothesis, second language learners notice their errors and linguistic problems in their output products, they repeat them. Noticing occurs in producing a target language. Schmidt (2001) states "appears necessary for understanding nearly every aspect of second and foreign language learning" (p.6). In his noticing hypothesis, awareness is necessary for noticing which in turn is important for learning. The claim is that "intake is the part of the input that learner notice." (1990, p.139).

2) The Role of Writing in Second Language Acquisition

Harklau (2002) argues that it is important for students to learn writing in a second language. The paper mentioned the notion of a learner, target language variation, multimodality and language socialization, and interactional approaches. In second language learning classroom settings, learners acquire morphology and syntax through their input, interaction, task structure and negotiation (Long & Robinson, 1998). According to collected empirical data on classroom research (Allwright & Bailey, 1991), students learn through the inter-relation of interaction.

3) Previous Studies in Peer Feedback in English as a Second Language / English as a Foreign Language Writing

Paulus (1999) investigated the positive effects of peer feedback in writing. He found that ESL students gave surface-level peer feedback for revisions, such as spelling, tense, plural or singular and punctuation. In addition, Suzuki (2008) examined the feedback differences between self-revision and peer-revision in terms of negotiation in writing. These studies founded that learners tended to focus on forms and the, morphological, and lexical levels in self-revision. In peer negotiation, they paid more attention to the content of writing such as a topic or idea. Findings indicated that the learners used more metatalk during peer revisions than during self-revisions. Furthermore, Wang (2014) used a rubric table for assessing writing compositions in peer feedback as a usefulness criteria reference for Chinese students to examine several issues: (1) the students' limited English proficiency with using a rubric criterion, (2) the students' attitudes towards peer feedback practice, and (3) the students' interpersonal relationships. Rollinson (2005) stated that peer feedback in EFL/ESL writing facilitated the students' audience awareness. The learners probably feel that these are less beneficial interactions because their classmates' English proficiency level is nearly same as theirs.

Research Focus

This study addresses the following research questions: 1. How do Japanese EFL learners give peer feedback on their writing essays? - Do the Japanese EFL learners notice the processes of output products when they receive CF (Corrective Feedback) in the form of either reformulation or error correction in peer feedback? 2. How do Japanese EFL learners organize paragraphs: topic, support, and conclusion? - How do they notice and revise their writing after receiving peer feedback?

This research sought to determine the effects of the interaction in peer feedback and to understand at what points Japanese students focus on feedback correction, addressing the question of how learners show their weakness in correcting peer essay writing, and how these corrections affect their revising processes. Their language features and interaction could illustrate learners' metalanguage or interlanguage skills in the process of second language learning. In addition, how should we as language instructors approach peer or group work in the classroom? Assuming that psychological barriers affect peer feedback, language instructors should train learners how to assess peer feedback in the classroom. Learners initially hesitate to mark corrections on other students' papers. On the other hand, written feedback or comments could be evidence of the benefits of oral feedback.

Data Collection

1) Participants

To gather data on Japanese EFL learners, I collected and analyzed the data from my university class with consent written permission for taking written composition data from the students. The course is a mandatory English course. The students take a placement test in the beginning of the academic year, and are divided into their English proficiency level by a CASEC (Computerized Assessment System for English Communication) test. The CASEC test consist of two parts, listening and writing skills. The score band is from 0 to 1000 points. The score is also approximately converted into a TOEIC (Test of English for International

Communication) score. The students take the test on computers and choose from multiple answers for each question. The university has two compulsory English courses; “speaking and listening” and “reading and writing” for freshman and sophomore students. The courses are divided into four proficiency level classes based on the results of the CASEC test score; beginner (under 299 points on CASEC / under 240 points on TOEIC Listening and Reading test), intermediate (300 -450 points on CASEC / 240 - 355 points on TOEIC), upper-intermediate (451 - 599 points on CASEC / 355 - 545 points on TOEIC) and advanced (over 600 points on CASEC / 545 points on TOEIC).

For this study, we collected the data from an advanced level English course of “reading and writing” freshman students from the politics department. The class consisted of 22 students. From them, 12 writing compositions were collected randomly for a qualitative analysis. The English levels ranged from 451 to 599 points in the CASEC test, which is equivalent to between 355 and 545 points in the TOEIC Listening and Reading test.

2) Procedures

The research was conducted in the reading and writing class during the semester. The class time setting is 90 minutes. Twelve essays were randomly collected from among the 22 students. The data derived from eight female and four male students.

In this study, students had 25 minutes to write their essays by hand without the aid of a dictionary or the Internet. The topic of this essay was based on a quote from a study of Japanese student essay writing (Okugiri, Ijuin, & Komori, 2015). Specifically, the students were required to write an essay in response to the statement: *“Currently, people worldwide are able to use the Internet. Some people say that since we can read the news online, there is no need for newspapers or magazines, while others say that newspapers and magazines will still be necessary in the future. Please write your opinion about this issue.”* This statement was used because the topic was universal and familiar to everyone.

Table 1 shows the procedure of this empirical study. The participants engaged in a three-staged process. First, during Stage 1, the instructor explained the process of feedback. In Stage 2, the participants wrote their essay for 30 minutes. They were then they were required to give corrective feedback to their peers. For Stage 3, the corrective peer feedback time was for 20 minutes. During the correction time, the students could ask questions about their English grammar or contexts, or discuss the corrections in both Japanese and English. They checked their peers’ writing compositions for “lexical features, spelling and form,” “syntax, grammatical order, missing words,” and for “context, in appropriate sentences with the theme”, and for organizational parts, such as “topic sentence,” supporting sentences,” and “conclusion sentences.” Finally, in Stage 4, the corrective peer feedback was returned to the original student writers and they rewrote their revisions for 15 minutes. Table 2 presents the instructions of the corrective feedback by the instructor. The students noted each code, line, or words for their corrective peer feedback time.

		Peer feedback group
Stage 1	15 minutes	Instruction by a teacher
Stage 2	30 minutes	Writing an essay
Stage 3	20 minutes	Feedback with peer
Stage 4	15 minutes	Revise the essay

Table 1: Flow of the Writing Class with Peer Feedback

	Checking points	the way of feedback
1.	lexical features; spelling, form	— + corrections
2.	syntax; grammatical order, missing word(s)	~ + corrections
3.	context; inappropriate sentences with the theme	○ + corrections
4.	topic sentence (s)	T
5.	supporting sentence (s)	S
6.	conclusion sentence (s)	C

Table 2: Instructions by a Teacher for the Peer Feedback

Data Analysis

First, to analyze the peer feedback, Table 3 shows that a T-unit analysis was used for measuring writing compositions in this study. By definition, a T-unit has a main clause with a subject and verb, where subordinate clauses are attached to or embedded within it (Hunt, 1965). Syntactic development can also be seen by analyzing T-units. Using error-free T-units is a more precise way to measure syntactic development for nonnative speakers than standardized tests, teacher evaluations, or placement tests with written data. Table 3 shows the definition of T-units. Based on the definition of a T-unit, each student's sentences were counted. The T-unit analysis all showed the learners' syntactic development to be checked more exactly (Gass, & Selinker, 2008).

1.	I did my homework.	T-unit
2.	I did my homework, although I was sleepy.	T-unit
3.	although I was sleepy.	Non-T-unit

Table 3: Definitions of T-units

Second, in the analysis of the noticing process in corrective feedback, various codes on noticing and uptake referenced (Santos et al., 2010). Table 4 represents the corrective feedback codes in this study, which were categorized into eight items in the students' writing compositions. Five codes were categorized for the corrective peer feedback: CC (completely changes), PC (partially changed), UC (completely unchanged), NA (non-applicable), and ADD (the participants added new words or sentences after the feedback). Each code definition is given in Table 4 below. In addition, Table 5 presents examples of both the original and the revisions.

Code Type	Definition
1. CC: completely changed	All errors had been corrected.
2. PC: partially changed	At least one error had been changed in the direction of the feedback provided.
3. UC: completely unchanged	The T-unit still had all the errors shown in the original version
4. NA: non-applicable	The original T-unit had no errors.
5. ADD	New words or sentences were added after the corrective peer feedback

Table 4: Corrective Feedback Categorized Codes and their Definitions

Student	T-UNIT	Code
Original text S1	First, the news online has swift <u>imformation</u> .	
Revised S1	First, the news online has swift <u>information</u> .	CC
Original text S2	I'm going to <u>sugest</u> the reason and point paper <u>devides</u> good points and bad points.	
Revised S2	I'm going to <u>represent</u> the reasons and point paper media's good points.	CC
Original S6	Newspapers will be <u>trush</u> next day, but the Internet <u>is not trush</u> .	
Revised S6	Newspapers will be <u>trush</u> next day, but the Internet <u>will not be trush</u> .	PC
Original S5	They are not good for enviroment.	
Revised S5	They are not good for <u>enviroment</u> .	UC
Original S8	Second, when you read the news and manga online, your eyes are very tired but newspapers and magazines don't have this bad point.	
Revised S8	Second, when you read the news and manga online, your eyes are very tired but newspapers and magazines don't have this bad point.	NA
Original S10	no sentence(s)	
Revised S10	Finally, many people should use Internet.	ADD

Table 5: Examples of Revision and Error Correction with Coding of T-units

Finally, to gain more insight into the details of CC (completely changed) and PC (partially changed) corrective feedback, the results were divided into error corrections and reformulations in their revised essay writing compositions. From the previous study (Santos, & Manchon, 2010), the definitions of error corrections and reformulations are as shown in Table 6.

Error correction
Original text: First, the news online has swift <u>imformation</u> .
Reformulation: First, the news online has swift <u>information</u> .
Reformulation
Original text: I'm going to <u>sugest</u> the reason.
Error Correction: I'm going to <u>represent</u> the reasons.

Table 6: Definitions of Error Corrections and Reformulation

Discussion

To summarize the answer to our first research question, our participants paid more attention to the lexical and forms of second language. Suzuki (2008) categorized language-related changes (LRCs) into three main levels: word-level text changes, sentence-level text changes, and discourse-level changes. Participants gave more error corrections than reformulations in their peer feedback, which showed that the learners paid more attention to morpheme levels, verb usages and lexical forms, such as tense, third person singular-s, singular and plural forms, and spelling. These findings suggest that Japanese English learners have learned more syntax and lexical knowledge in their secondary school EFL courses. It was easy for them to point out these concerns, but they were weaker in paraphrasing words or phrases in English.

In addition, during their revision time, the participants reconsidered the structures of each sentence. Therefore, they revised their original sentences with syntactic knowledge. As a result of the feedback, the number of T-units increased slightly over the original composition, including that the learners improved their syntax knowledge through non-forced feedback (Van Beuningen et al,2012).

Regarding the five categorizations of feedback, the learners remained at 20.2 % UC (Completely Unchanged) which suggests that the learners did not notice how to correct or revise these sentences. In L2 classrooms, instructors should also give feedback where learners did not notice language errors and mistakes.

As for the second research question about skills in organizing essays, the participants gave corrective feedback about the writing compositions in the peer feedback time. Interestingly, only 10.4 % of the feedback was about the conclusions, suggesting that they did not know how to write a “conclusion” or had no time to write it in Stage 2. The participants noticed their missing conclusions during their peer feedback time, only then adding “conclusions” after the peer feedback and in their revisions. These results indicate that L2 learners noticed some features and forms of the language through the corrective feedback, and then revised their compositions to be better than the original versions.

Results

The first question asked how the Japanese EFL learners give feedback on their writing essays and if they notice the processes of output products while receiving CF (Corrective Feedback) or not. For one aspect of this question, we counted the number of words before and after the peer feedback to see how the learners add more words, phrases, or sentences after reading their peer's essay writing and how they were stimulated in revising their writing compositions. Table 7 shows the number of words in their original version and their revisions, before and after the peer feedback. It shows that the number of words slightly increased, 101.6 words to 107 words on average.

Student ID ($n=12$)	Original	Revised
S1	91	93
S2	109	94
S3	101	90
S4	95	141
S5	160	165
S6	113	115
S7	100	107
S8	84	84
S9	99	97
S10	74	85
S11	76	96
S12	117	117
<i>M</i>	101.6	107.0
<i>SD</i>	21.8	23.4
Max.	160	165
Min.	74	84

Table 7: The Number of Words After Peer Feedback

Table 8 shows the number of T-units, original and revised versions, including the syntactic development of learners. Each learner increased T-unit by a small number after peer feedback. The mean score was 8.1 to 9.3 and the standard deviation was 2.6 to 2.7.

Student ID ($n=12$)	Original	Revised
S1	7	10
S2	6	7
S3	7	9
S4	8	11
S5	16	17
S6	9	9
S7	8	9
S8	6	6
S9	7	8
S10	8	10
S11	6	7
S12	9	9
<i>M</i>	8.1	9.3
<i>SD</i>	2.6	2.7

Table 8: The number of T-units

They then answered the second research question about how Japanese EFL learners organized their paragraph writing (i.e., topic, supporting and conclusion parts), and how they noticed and revised after peer feedback. Table 9 shows the number of topic, supporting, and conclusion sentences in the peer feedback, which the participants marked as “T,” “S,” and “C,” reprehensively, during peer feedback. Figure 1 shows that the participants put down “T” 12 (25%), “S” 31 (64.5%), and “C” 5 (10.4%). Everyone wrote topic sentences and supporting sentences, but not everyone wrote conclusion sentences.

	T	S	C
S1	1	3	0
S2	1	3	0
S3	1	2	1
S4	1	2	0
S5	1	3	1
S6	1	2	1
S7	1	3	0
S8	1	3	0
S9	1	3	1
S10	1	2	0
S11	1	2	0
S12	1	3	1
Total	12	31	5
<i>M</i>	1	2.6	0.4
<i>SD</i>	0	0.5	0.5

Table 9: The number of topic, supporting, and conclusion sentences in peer feedback

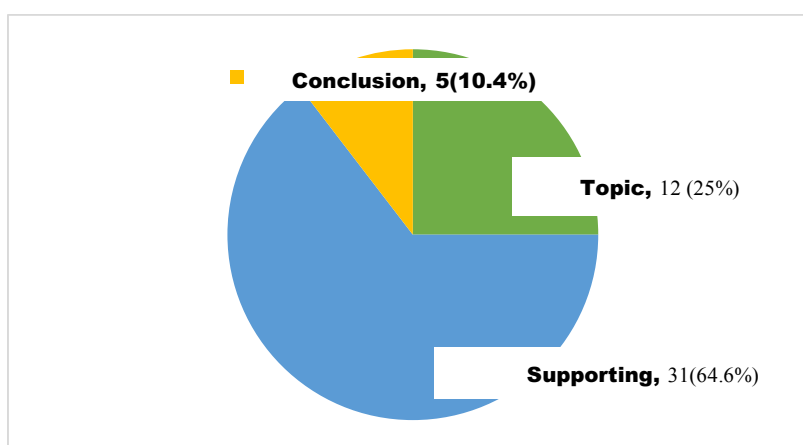


Figure 1: The Number of Topic, Supporting, and Conclusion Sentences in Peer Feedback

Finally, the individual categorizations of peer feedback groups are shown in Table 10. To analyze the participants' revisions, five codes were applied regarding the revisions of their essays after peer feedback, as shown in Table 11 and Figure 2: CC (Completely Changed) 29

(26.6%), PC (Partially Changed) 11 (10.1%), UC (Completely Changed) 22 (20.2%), NA (Non-Applicable) 39 (35.8%), and ADD (additional sentences) 8 (7.3%).

	CC	PC	UC	NA	ADD
S1	3	1	4	1	1
S2	1	1	2	1	2
S3	4	2	0	2	2
S4	2	0	0	6	4
S5	5	0	0	9	0
S6	1	1	4	3	0
S7	2	0	4	2	1
S8	2	2	0	2	1
S9	0	1	4	4	0
S10	1	3	3	1	2
S11	1	1	1	3	1
S12	5	0	1	3	0
Total	29	11	22	39	8
<i>M</i>	2.4	0.9	1.8	3.3	0.7
<i>SD</i>	1.7	0.9	1.4	2.4	1.0

Table 10: Individual Categorization of Peer Feedback Groups

	<i>n</i>	%	Mean	<i>SD</i>
CC	29	26.6	2.4	1.7
PC	11	10.1	0.9	0.9
UC	22	20.2	1.8	1.4
NA	39	35.8	3.3	2.4
ADD	8	7.3	0.7	1.0
Total	109	100	9.1	7.4

Table 11: Categorization of Peer Feedback Groups

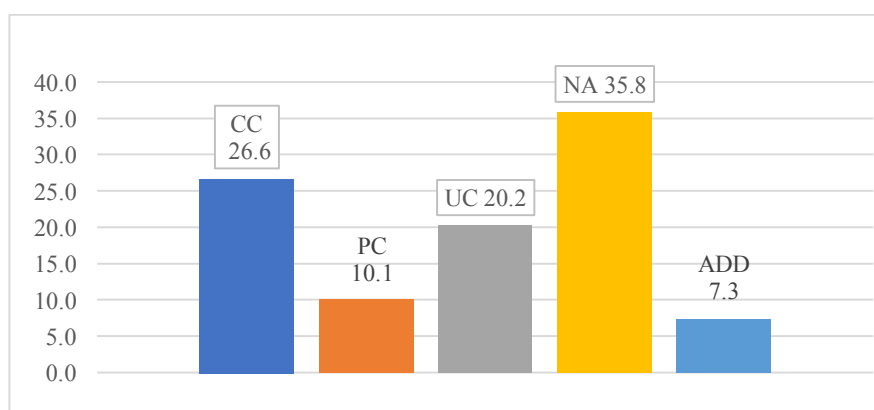


Figure 2: The Categorization of Peer Feedback Groups

To analyze the data in greater details, we analyzed the CC (Completely Changed) and PC (Partially Changed) into the categories of error corrections 18 (54.5%) and reformulations 15 (45.5%), as shown in Table 12 and Figure 3.

	Error	Reformulation
S1	0	4
S2	1	1
S3	2	3
S4	2	0
S5	3	3
S6	2	0
S7	1	1
S8	1	2
S9	1	0
S10	2	2
S11	0	2
S12	0	0
Total	15	18
<i>M</i>	1.25	1.50
<i>SD</i>	0.92	1.32

Table 12: The Number of Error Corrections and Reformulations

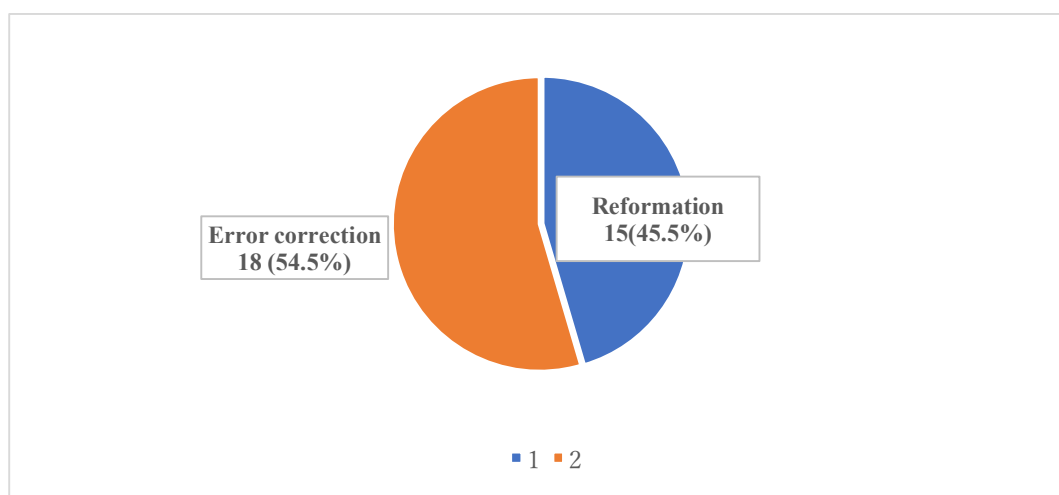


Figure 3: Error Correction vs Reformation

Conclusion, Suggestions for Future Study

In reviewing studies of writing feedback, Storch (2002) discussed equality and mutuality in studies of ESL pair work. To provide effective pair work, the learners should work equal amount and cooperatively. More importantly, the learners will notice their errors and improve their essays by giving other feedback. Peer feedback activities in ESL tend to lead to more learner-centered class. Izumi (2016) also emphasized that “noticing” in the EFL classroom is an essential factor effectively focus on form. In pair work, the learners have audience to raise

“audience awareness” about writing. In the process of sharing feedback, they interact with each other, correct errors, and ask questions about the content of their essays. The process brings collaborative learning and scaffolding to EFL classrooms. In the corrective feedback process, each learner might have a different proficiency level. Learners notice different errors or acquire new language knowledge individually (Hanaoka, 2007). However, it takes time to make Japanese EFL university students feel free to speak and correct errors. They rarely share opinions with one another at the beginning of the term. Wang (2014) found that psychological matters could be seen in peers’ rubric evaluation. The learners needed to have an interpersonal relationship to give evaluation rubric points to each other and this affected the usefulness of peer feedback. Therefore, learners need more practice giving feedback in written compositions in EFL classes.

In general, most of the students enter university based on multiple choice type proficiency examinations. During high school, most students learn English more through analytical than experiential learning (Izumi, Shiraku & Okuda, 2011). Therefore, the instructor, who teaches reading and writing courses, should give the learners clear assessment points in the class and train the students to compare sufficient and insufficient essays through reading textbooks or teachers’ models as input enhancement (Hanaoka, & Izumi, 2012). It would be difficult or challenging for the learners to give comments to each other without knowing evaluation points established by the teacher. In the curriculum, the teacher is also required to consider the effect of peer or group work. The practice of peer feedback should not only focus on forms of grammar, but also on meaning (Izumi, 2016). The teacher should guide learners how to write their compositions logically, with three main points: topic, supporting paragraphs, and conclusion. Then, the learners would review their writings by themselves and give feedback to others.

In the reading and writing course, giving sufficient input and output activities would be essential. In giving peer feedback, EFL teachers create an interactive environment for students to focus on teaching or stimulating L2 learners’ undiscovered knowledge. This approach of “noticing corrective feedback would raise awareness of L2 students’ language features. More investigation is needed to see how EFL learners notice their writing through spontaneous attention to the written form. Further empirical research is also needed to see how L2 learners produce their output and what types of feedback could be used in L2 writing. To improve the output products, we can see more L2 learners engaged in IL (Interlanguage), intake, and uptake in the process.

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Contact email: educ0153@komazawa-u.ac.jp

How the Acoustic Correlates of English Obstruents Appear in Multivariate Analysis

Yixin Zhang, Kyushu University, Japan
Yoshitaka Nakajima, Sound Corporation, Japan
Kazuo Ueda, Kyushu University, Japan
Gerard B. Remijn, Kyushu University, Japan

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Abstract

Multivariate analysis of the acoustic characteristics of speech can provide insight into English phonology. To identify the acoustic correlates of obstruents, we here performed an origin-shifted factor analysis of English speech samples. Our multivariate analysis of spectral changes of speech demonstrated that one extracted factor, the so-called “mid-low factor” with high factor loadings around 1100 Hz, was strongly associated with vowels and sonorant consonants. Obstruents never went into the positive direction on this spectral factor. By contrast, two other spectral factors showed some association with obstruents, i.e., a “high factor” with high factor loadings above ~3300 Hz, and a “low & mid-high factor”, with high factor loadings around 300 Hz and 2300 Hz. We focused on two general categories of English obstruents: fricatives/affricates and plosives in more detail. The results showed that six fricatives/affricates (/s/, /z/, /ʃ/, /ʒ/, /tʃ/, /dʒ/) occupied the positive direction only on the “high factor”, while five other fricatives/affricates (/θ/, /ð/, /f/, /v/, /h/) occupied the positive direction on both the “high factor” and the “low & mid-high factor”. All plosives (/p/, /t/, /k/, /b/, /d/, /g/) also occupied the positive direction on both these two spectral factors, but seemed mainly distributed on the “high factor”. Overall, if we assume that the “mid-low factor” is correlated with what is called sonority, our factor analysis provides corroborating evidence for a widely-accepted idea in phonology: In the sonority hierarchy, obstruents are given the lowest rank, with plosives located at the bottom, and they do not constitute syllable nuclei.

Keywords: Speech Perception, English Phonemes, Factor Analysis, Sonority

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Introduction

When we pronounce or perceive English speech, we prefer to combine several phonemes into a combination of sounds called a syllable. Syllables play a prominent role in theories that have proved useful in describing many prosodic phonological features of different languages [1]. In its common typology, a syllable is divided into three parts: the onset (or beginning), the nucleus (or peak), and the coda (or end). The nucleus is the most obligatory part in a syllable, and a syllable may even consist only of a nucleus, e.g., the first syllable in the disyllable word about. The nucleus is typically a vowel, while the onset of the coda is often made up of consonants [2]. This reflects a principle that is used to classify English phonemes: the sonority hierarchy. A high position in the sonority hierarchy represents a close proximity to the syllable nucleus. Vowels occupy the highest position in the sonority hierarchy, followed by sonorant consonants (glides, liquids, nasals). Obstruents (fricatives/affricates, plosives), formed by obstructing airflow, occupy the lowest position in the sonority hierarchy [3]. Thus obstruents are always considered as the syllable boundaries, while vowels always have a position on the syllable nucleus.

It has been argued that multivariate analysis of acoustic characteristics of English speech sounds can be related to phonological features. In one of the most recent studies using the classic factor analysis, Ueda and Nakajima (2017) found that multivariate analysis of speech samples from eight languages/dialects universally showed three spectral factors that appeared in four frequency bands [4]. Nakajima et al. (2017) further showed that the distributions of factor scores of English vowels, sonorant consonants, and obstruents, respectively, went from high to low on a spectral factor with high factor loadings on a frequency range around 1100 Hz. This tendency was highly related to the sonority hierarchy [5]. Furthermore, in our recent study, we have shown that the distribution of obstruents in English speech is related to two spectral factors: one is a bimodal factor with high factor loadings around 300 Hz and around 2300 Hz, and the other is a factor with high loadings on a frequency range around 4100 Hz [6]. In these studies, however, an English speech database was used in which the labeling of some phonemes was incorrect, and for this reason samples were omitted. To further investigate how acoustic characteristics of English and phonology are related, a new English speech database was created. In the present study, we performed a newly-developed type of factor analysis over speech samples from this database to confirm the previous findings, and to identify the acoustic correlates of English obstruents in more detail.

Methods

Speech Samples

First, a new English database was created, which contained 100 sentences uttered by one male and two female native-English speakers. The speech samples in the database were recorded with a sampling frequency of 44100 Hz and 16-bit linear quantization. The speech signals of all the spoken sentences segmented into individual phonemes and were labeled utilizing the International Phonetic Alphabet, with the Cambridge Advanced Learner's Dictionary as pronunciation reference [7]. A total of 11935 English phonemes was used as analysis samples.

The Origin-shifted Factor Analysis

The speech samples were analyzed with the origin-shifted factor analysis, that has been recently developed [8]. This method is potentially suitable to resynthesize speech, because every starting point of the data is moved from the gravity center to the origin, so that all silent parts in speech signals would remain silent. In our recent study [6], we compared a classic factor analysis and the origin-shifted factor analysis and focused on the two main differences between these multivariate analysis methods: the origin shift and cepstral liftering. Cepstral liftering is a smooth processing of the signal and applied to the analysis of speech [9]. We argued that multivariate analysis with cepstral liftering would not relate to the real auditory signal quality, since it will smooth the speech signals and may weaken the features of speech. It was concluded that the origin-shifted factor analysis without cepstral liftering is more recommendable for speech analyses, and we therefore used it in the present analysis.

The two-dimensional axes derived from the origin-shifted factor analysis were rotated by varimax rotation [10]. As a result, similar to our previous study [6], three main spectral factors were extracted and their factor loadings were obtained. All analysis samples of English phonemes were divided into three categories: vowels, sonorant consonants, and obstruents. In total, 4528 vowels, 2467 sonorant consonants, and 4940 obstruents were used. The factor scores of the central midpoints of time for all the labeled phoneme samples were calculated. To observe the acoustic correlates of obstruents in more detail, the distributions of all English phonemes were analyzed. We focused on the distributions of obstruents in particular (4940 in total), as represented in the two-dimensional factor space.

Results

Factor Loadings of the Three Spectral Factors

Figure 1 shows the factor loadings obtained by the origin-shifted factor analysis for all the English speech samples spoken by three native speakers. The cumulative contributions of the three spectral factors were around 47%. Four main frequency bands were obtained. Their frequency ranges are indicated by the center frequencies on the horizontal axis in Figure 1. The first band was a low-frequency band, from about 50 to 600 Hz. The second band was a mid-low frequency band, around 600 to 1700 Hz. The third band was a mid-high-frequency band, from about 1700 to 3000 Hz. The fourth constituted a high-frequency band, which was above 3000 Hz. These four frequency bands were related to three spectral factors. One factor, the “low & mid-high factor” (Figure 1, red line) was bimodal, because it showed high factor loadings on two center frequency ranges around 300 Hz and around 2300 Hz. Although the second peak of this factor did not appear very prominently, we considered it to be similar to the shape of the “low & mid-high factor” as found in our previous study [6]. The second factor, the “mid-low factor”, was related to the frequency range around 1100 Hz (Figure 1, black line). The third factor, the “high factor”, was related to the frequency range around 4100 Hz (Figure 1, blue line).

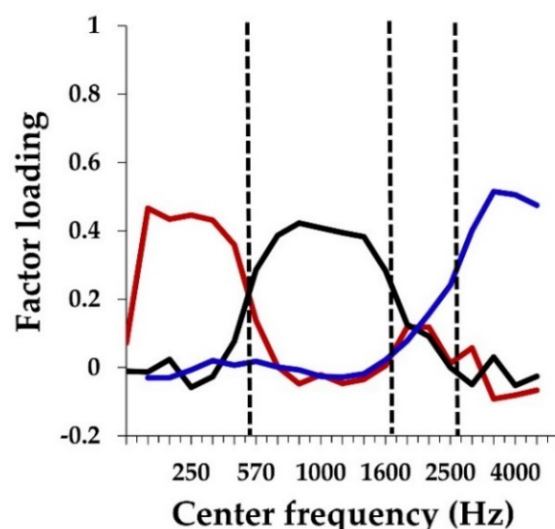


Figure 1: Factor Loadings of the Three Extracted Spectral Factors of 100 English Speech Samples from Three Native Speakers with the Origin-Shifted Factor Analysis.

Factor Scores of the Three Spectral Factors

The factor scores of all English phonemes were obtained and distributed into three categorical areas in the factor space, i.e., vowels, sonorant consonants, and obstruents. On the “mid-low factor” with a center frequency range around 1100 Hz, the highest factor scores were obtained by vowels, followed by sonorant consonants, and obstruents. Moreover, most of the obstruents occupied a position very near to or below zero on the “mid-low factor”. Instead, obstruents were associated with the two other spectral factors: the “low & mid-high factor” and the “high factor”, similar to the result in our earlier research [6].

To get more insight into the distributions of individual obstruents in the factor space, more detailed analyses of obstruents on the “low & mid-high factor” and the “high factor” were performed. Figure 2 shows the distributions of the factor scores of individual obstruents divided into eleven fricatives/affricates in Figure 2(a), and six plosives in Figure 2(b). The distributions show that five fricatives/affricates (/θ/, /ð/, /f/, /v/, /h/) were close to the origin and both located on the “low & mid-high factor” and the “high factor”, while six fricatives/affricates (/s/, /z/, /ʃ/, /ʒ/, /tʃ/, /dʒ/) were distributed on only the “high factor”, occupying a relatively wide distribution and high position. Furthermore, all six plosives (/p/, /t/, /k/, /b/, /d/, /g/) occupied a position above zero on the “low & mid-high factor” and the “high factor”. Two plosives (/t/, /g/) occupied a wider distribution and reached the highest positions near fricatives/affricates (/ʃ/, /tʃ/, /dʒ/) on the “high factor”.

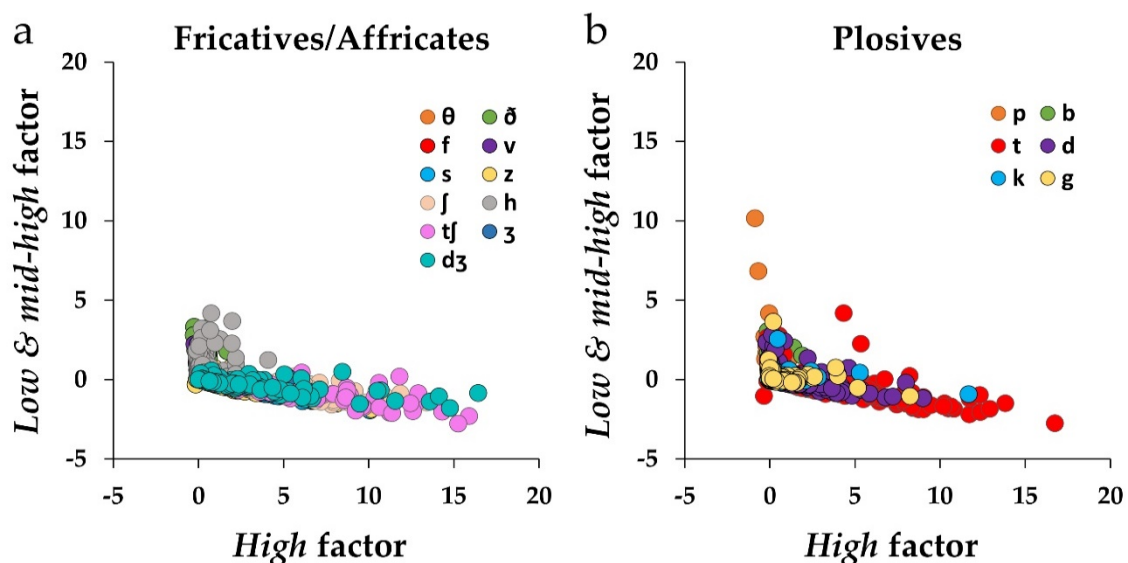


Figure 2: The Distributions of the Factor Scores of Obstruents Divided into Fricatives/Affricates (A) and Plosives (B) in the Two-Dimensional Space of the “Low & Mid-High Factor” and the “High Factor”.

We further observed the distributions of the average factor scores of the fricatives/affricates in Figure 3(a) and of the plosives in Figure 3(b), in the two-dimensional space of the “low & mid-high factor” and the “high factor”. In Figure 3(a), the five fricatives/affricates (/θ/, /ð/, /f/, /v/, /h/) were close to the origin and on both the “high factor” and the “low & mid-high factor”. The distributions of the six fricatives/affricates (/s/, /z/, /ʃ/, /ʒ/, /tʃ/, /dʒ/) were almost parallel to and only located on the “high factor”. In Figure 3(b), all six plosives (/p/, /t/, /k/, /b/, /d/, /g/) were close to the origin and on both the “high factor” and the “low & mid-high factor”, but they were mainly distributed on the “high factor”.

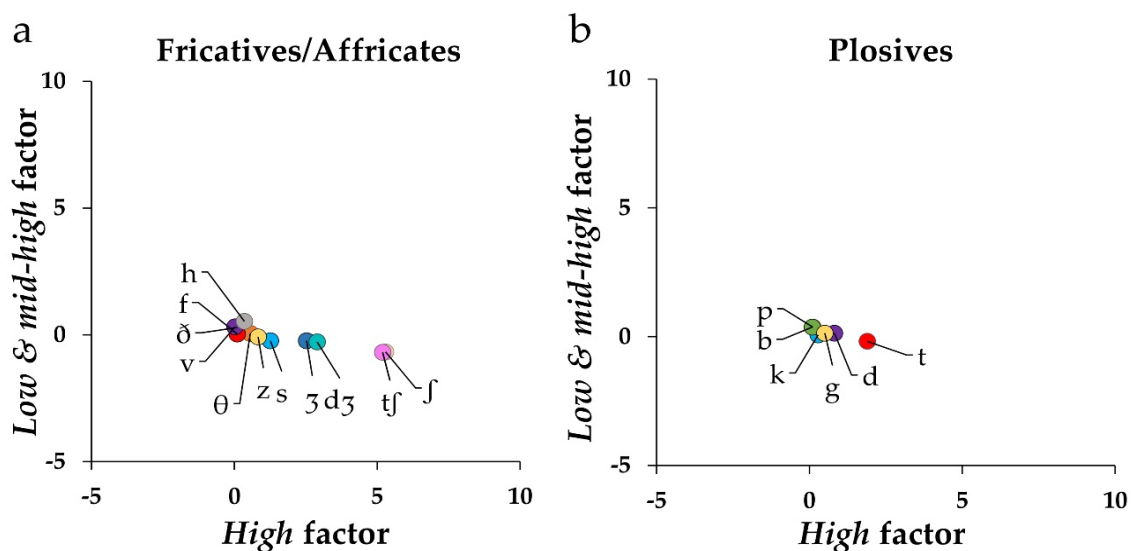


Figure 3: The Distributions of the Average of the Factor Scores of Obstruents Divided into Fricatives/Affricates (A) and Plosives (B) in the Two-Dimensional Space of the “Low & Mid-High Factor” and the “High Factor”.

Conclusions

In the present study, the origin-shifted factor analysis was applied to English speech samples. The samples were taken from a newly-recorded database that contained 100 sentences each spoken by three native speakers of English. In total, 11935 individually-labeled English phonemes were used as analysis samples. The analysis showed that the distributions of the obtained factor scores in the factor space well reflected the phonological roles that English phonemes are considered to have.

Confirming earlier research [5, 6], our analysis proved again that the “mid-low factor”, with high factor loadings on a frequency range around 1100 Hz, was only related to vowels and sonorant consonants. Vowels, sonorant consonants, and obstruents were separated very clearly on this factor. Vowels had the highest position on the “mid-low factor”. Always playing the roles of syllable nuclei in English, vowels are high in the sonority hierarchy. Sonorant consonants occupied the middle position on the “mid-low factor” factor. They are also in the middle position in the sonority hierarchy, indicating that sonorant consonants play roles close to those of vowels, in that some of them also can be syllable nuclei. For example, the nucleus of the first syllable in the word *little* is the vowel /i/, but the nucleus of the second syllable is the sonorant consonant /l/ [2]. Obstruents had the lowest position on this “mid-low factor”. They also have the lowest position in the sonority hierarchy, indicating that obstruents can hardly be treated as syllable nuclei. Given these findings, we can therefore call the “mid-low factor” the “sonority factor”, confirming previous results [5, 6].

Secondly, we investigated the acoustic natures of English obstruents in the other two spectral factors as also extracted in our early studies [6], i.e., the “low & mid-high factor” with bimodal frequency ranges around 300 Hz and around 2300 Hz, and the “high factor” with a frequency range around 4100 Hz (Figure 2, Figure 3). In an English syllable, obstruents typically occupy a low position on the sonority hierarchy. This was clearly reflected in our analysis: obstruents never went into the positive direction of the “mid-low factor” - the “sonority factor”. By contrast, obstruents were only distributed on the “high factor”, or on both the “low & mid-high factor” and the “high factor”. Fricatives/affricates occupied a wider distribution than plosives on the “high factor”. These pieces of evidence confirmed that obstruents do not constitute the syllable nucleus.

With the present multivariate analysis, we thus connected acoustics and phonology, by extracting spectral factors that seem to represent sonority features of English speech sounds. To further identify the acoustic features of obstruents, the newly-recorded English database will be used for more analyses about the categorical perception of English phonemes.

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Contact email: 3DS20005M@s.kyushu-u.ac.jp
remijn@design.kyushu-u.ac.jp

Business English as a ‘Lingua Franca’ (BELF): Focusing on Cross-Cultural E-mail Communication

Masako Nishikawa-Van Eester, Nishogakusha University, Japan

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Abstract

Business English as a ‘Lingua Franca’ – BELF – has been getting more and more international attention recently in the field of TESOL because global business has become common and normal by now. The article focuses on aspects relevant to English business e-mail as it is the cornerstone of international business communication. It is often assumed that writing English e-mail messages is in the first place a question of vocabulary and grammar, but experience is pointing to a much more important aspect that Japanese students and teachers tend to overlook: paragraph writing. The article offers insights into the reasons why paragraph writing is so important for Japanese students. Among others it will be pointed out that the different styles of logical thinking that are pervasive in various cultures ("cultural thought patterns") influence how arguments are built up in each language. In order to be able to write an understandable English business e-mail message, Japanese students need to realize this and learn how to apply English logic.

Keywords: BELF, Business English, Lingua Franca, E-Mail, Cultural Thought Patterns, Paragraph Writing,

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Introduction

BELF, or Business English as a ‘Lingua Franca,’ has been getting more and more attention in the TESOL field. What is the definition of “Lingua Franca” then? According to Oxford Learner’s Dictionary, it is explained as “a shared language of communication used between people whose main languages are different” with an example sentence as “English has become a lingua franca in many parts of the world.” Kankaanranta and Louhiala-Salminen (2013) traced back the origin of the concept of “lingua franca,” by citing Knapp and Meierkord, that it was a language variety used in the Mediterranean between the 15th and 19th century which enabled trade between people who did not share the native language.

Regarding the English language as a lingua franca, Crystal (2003) pointed out, in his work “English as a Global Language,” that the consciousness of “a strong need for a lingua franca for the whole world emerged only in the twentieth century, in the 1950s in particular (p. 12). As more and more nations began joining global bodies such as the United Nations (since 1945), the World Bank (also 1945), UNESCO and UNICEF (both 1946), the World Health Organization (1948) and the International Atomic Energy Agency (1957). Furthermore, at a more restricted level, multinational and political organizations such as the Commonwealth and the European Union needed a single lingua franca for mutual understanding and communication.

As the need for more global communication in diverse fields, the English language has become the major language of the world. In Crystal’s description (p. 13), it is getting quite normal that we can imagine a situation where a Japanese company director arranges interpreters and a venue to meet his German and Saudi Arabian contacts in Singapore to plan a multi-national deal. Or you could also imagine that they are going to just plug in to a 3-way online support system from where they respectively are. However, the most comfortable and least complicated alternative is to make use of just one language, English. Not only Crystal (2003) but also McKay (2002) pointed out that the need for a global language, a lingua franca, is particularly appreciated by the international academic and business communities. On the other hand, Kankaanranta and Planken referred to the ambiguity in studying of this specific field, explaining there has been relatively little systematic research that has focused on “how and why it matters” (p.3).

In any case, the English language teaching (ELT) business has become one of the major growth industries around the world (Crystal, p.112). From that perspective, Nishikawa-Van Eester and Van Eester researched BELF focusing on actual cross-cultural business scenes in Japan with an intention to report some pedagogical implications in realistic teaching/learning contexts (2021). This is to be discussed later in this article.

World Englishes and Cultural Thought Patterns

As seen in the previous section, English is not only the language of English-speaking countries such as the USA and the UK anymore; the dominance of English has penetrated nearly all global economic activities so that, as a factor for successful business development, it is absolutely necessary to consider and strategize how each individual’s actual and practical English proficiency could be optimized (Kankaanranta and Planken, p.9).

Kachru categorized that there are basically three groups in the world from the perspective of the status of English use (see the graphic below), which he named 1) ‘the inner circle,’ 2) ‘the

outer/extended circle,’ and 3) ‘the expanding/extending circle’ (Crystal, pp. 60-61). He defined these three circles as following: 1) refers to the countries where English is the primary language; 2) involves the earlier phases of the spread of English in non-native settings, where the language has become part of a country’s chief institutions, and it plays an important ‘second language (ESL)’ role in a multilingual setting, and 3) involves the nations which recognize the importance of English as an international language though they do not have a history of colonization by members of 1), nor have given English any special administrative status. In this group, English is taught as a ‘foreign language (EFL); There are some seventy-five territories in which English has held or continues to hold a special place, as a member of either 1) or 2).

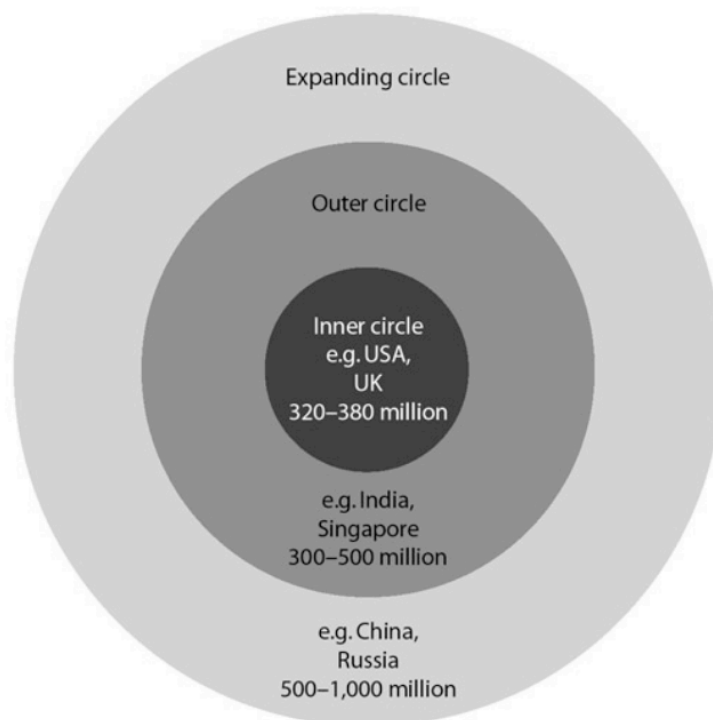


Figure 1: ‘Three Circles of English’ by Kachru’ from “English as a Global Language” by Crystal (2003, p.61)

According to Saraceni (2015), the notion of ‘World Englishes (WE)’ has made us realize the emergence of different varieties of English as a consequence of the language having spread all over the world (p. 79). He also noted that the field of WE is a descriptive, empirical study of ‘nativized’ varieties of English in Kachru’s ‘Outer Circle’ (p. 5).

Thus, a large, non-English-native population, everywhere in the world, has to learn and use English. However, there is a lot of variety in these “Englishes.” As shown in Kachru’s categorization, different groups from diverse cultural, historical, geographical, and linguistic backgrounds use English in order to communicate with the rest of the world.

Kaplan stated (1966) that we think in a specific thought pattern, linked to the language that we use as our first language. He also described the thought patterns inherent in different language groups (see the graphic below).

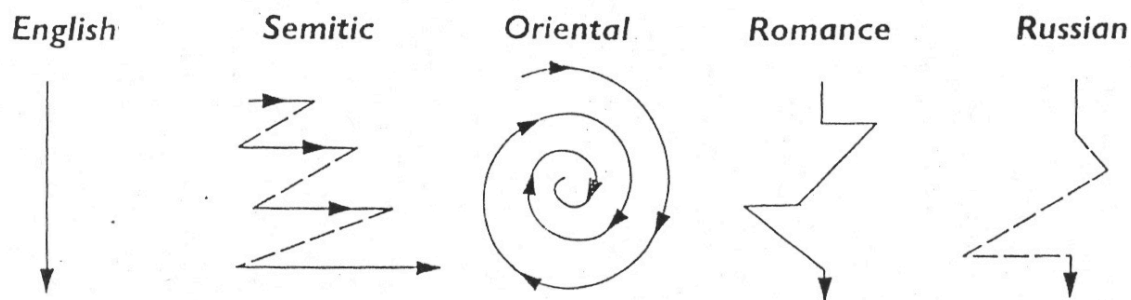


Figure 2: Kaplan, 1966

Presumably, a number of professional English teachers (especially those with ESL experience) have experienced Kaplan's findings for themselves. Now, based on this analysis by Kaplan, we can imagine what could happen if a Japanese native speaker with little training of doing so in English writes a business e-mail or gives a presentation. The reaction by a native or near-native speaker of English would be "What's the point?" or "Can you please explain it again?" Due to the nature of the Japanese way of thinking that avoids being linear and straight, the English (near-)native speaker gets confused. In order to overcome this shortcoming, it is effective to implement trainings to write based on the concept of paragraph writing.

Paragraph Writing

A number of English-speaking universities worldwide have their own institutions such as "Writing Center" and "Writing Tutorial Services" at which they guide and coach their students how to write papers in classes as "Academic Writing"¹ by using the method of Paragraph Writing. They all explain repeatedly the importance of Paragraph Writing when writing in English. This benefits the non-native speakers of English because they can learn, in its framework, how English logic flows and functions.

Regarding Japanese native speakers' writing in English, Okada's study pointed out that there are two major problems. One is their tendency to explain things randomly and focus on their emotional reactions, and the other is that they tend to express things ambiguously without presenting detailed facts or reasons due to a Japanese cultural tendency to avoid conflict (2018). Citing Hirose (2003) in her article, Okada described a phenomenon that the Japanese rarely practice expository or argumentative writing while they usually write about their personal experiences or impressions.

As presented in the graphic earlier in this article, this is a rhetorical feature of Japanese (Oriental languages). In order to avoid conflict, they are not logical or critical in their writing even when in English (Okada, p. 74). Okada further argued that this could be improved by explicitly teaching the English rhetoric to the Japanese students.

Paragraph writing techniques are of crucial importance in business e-mails, a critical component of the BELF environment. A sound logic flow in English e-mails is crucial for creating an equal and trusted long-distance business relationship.

¹ Indiana University, University of North Carolina at Chapel Hill, University of Technology Sydney, and University of Toronto.

E-mail Communication in BELF

According to the study of Van Horen (2009), numerous researchers have been reporting American and Japanese business partners exchanging correspondences in English. From the cross-cultural perspective, he introduced Stanlaw's detailed documentation in 2004, concerning the strategic way English is used in the Japanese advertising industry. In this way, the use of English has become a target of analyses to TESOL/BELF researchers.

Nishikawa-Van Eester and Van Eester stated that BELF is at the core of the daily practice in their business operations and management, and that most of the communication between mainly European companies and their Japanese counterparts is done by English (2021). They pointed out that, contrary to other fields of WE, the correctness of the English language itself is not necessarily of importance in a BELF setting. Instead, what matters most is that the communication is correctly understood. They insist that, in BELF contexts, the English language is not a 'goal,' but just a 'tool' to use in order to achieve holistic and smooth interactions for mutual benefit.

From that viewpoint, Nishikawa-Van Eester and Van Eester argued how English should be taught, by presenting actual examples. The goal is again not to learn English itself but to acquire the ability to use English, optimized for fluent communications in BELF.

Discussion

Here are two e-mail message interactions used as example by Nishikawa-Van Eester and Van Eester.

Example 1

A. (European non-English native speaker, company X):

I am XXXXX XXXXXXXX, working for X here in Tokyo. I got your mail via XXXXXXXX. Sorry for writing this mail in English, my written Japanese is not as good as my spoken Japanese.

We are interested in following up further on your request, but we would like to understand better what you need.

The easiest would be for me to come to your office so we can talk about this.

I can make myself available any of the remaining working days of the year except for Th 12/18 and Fri 12/19.

If you are interested, please let me know which date/time suits you best and which XXXXXXXX office you are located at.

B. (Japanese native speaker, company Y):

Thank you for sending an email to me.

I didn't know X is in Tokyo.

And I please to hear your schedule this week.

I share your information with engineering side. And I have checked their schedule.

It is better to set a meeting 10am-12am December 19 XXXXXXXX

However I couldn't check all attendance's schedule. So the limited attends will join To the meeting.

Anyway we expect to meet you next Friday. If you can send any information in advance, We read it, and we prepare any questions to you.

*Have you ever been XXXXXXXX I attached the file of guide to XXXXXXXX
I look forward to meeting you.*

Example 2

A. (European non-English native speaker, company X):
*We would like to do the call on Friday January 9 at 17:00 JST (9:00 CET).
If that date/time is OK for you, I will come to your office and we can do the call together.*

C. (Japanese native speaker, company Z):
*I agree with your proposal.
I will reconfirm with you this conference call, in new year.*

In the first example, it is obvious that something went wrong. There is a major misunderstanding between these two businesspeople. A suggested to meet each other for further business opportunities by giving actual dates. He told explicitly that he would not be available on December 19, however, B scheduled the meeting for that day. It was obvious that B's English proficiency was not high enough to understand the meaning of 'except for,' on the other hand, A should/could have used much simpler expressions, by realizing the possible language limitations of Japanese English-users.

The second example is a good one as far as the aspect of BELF is concerned. Although English is not always correctly used in this situation, the meaning is perfectly clear. The 'errors' observed in the context do not hinder the communicators' interactions probably because all expressions are straightforward, and the flow and communication are established as a whole.

BELF is a genre that has not been studied and explored deeply and widely enough. We need to deliberately think what we should teach in BELF classes and how we should teach them in Japan. One certain point is that BELF should be regarded as one of ESP, or English for Specific Purposes, and the target students should learn BELF in the class of Business English, not Literature nor English Grammar.

Naturally and consequently, the teaching material for them have to cover appropriate business scenes and manners. The students need to acquire proper way of behaviors in multicultural contexts, and thus, the teaching materials need to be basically authentic reflecting the reality in cross-cultural business scenes. The students also need to learn more than just the English language. They are required to understand the situation itself in which they are supposed to react and interact in an appropriate manner taking the language-capabilities and cultural context of the counterpart into consideration.

Conclusion

It is interesting to see that, in BELF contexts, it sometimes does not matter if the language usage itself is correct. For instance, lexical or syntactical correctness might be merely a secondary issue. Therefore, teaching learners to be able to operate in BELF situations requires a different approach from teaching English for the sake of English.

That might be the crucial and determining aspect in the Japanese educational system because, as reported by Taguchi, Magid and Papi (2009), Japan is a country where English is in the

first place considered to be one of the most important school subjects, instead of being regarded a communicative tool in the real world.

It would be beneficial for Japanese learners of BELF if the classroom is an actual site where a holistic approach can take place as the entire milieu itself provides people with more authentic examples in daily life.

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Contact email: masako.nishikawa@gol.com
m-nishik@nishogakusha-u.ac.jp

*Designing Online Language Courses: Lessons Learned
from Teaching Vietnamese Language and Culture for Japanese Learners*

Tran Hoang Nam, Tokushima University, Japan

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Official Conference Proceedings

Abstract

This paper shows the lessons learned after several courses on “Basic Vietnamese language and culture” targeting Japanese university students and adult learners, which have been conducted in 2020. Influenced by the Covid-19 pandemic, the materials and methods prepared for conventional classroom have been adapted and modified to suit the online platform. Although intended for beginners, these courses have applied and integrated approach for teaching a language and its corresponding culture in line with principles of adult learning, active learning, and problem-based learning. The lessons were designed using a wide range of techniques such as videos, pictures, anecdotes, crosswords, open-ended question, quizzes using multiple choice answers followed by analysis of each choice, online test. For each lesson, the learners were introduced to new vocabulary and basic expressions related to a socio-cultural theme such as history, national character, medical system, sightseeing, business etc. Looking from the perspective of both learners and teachers by evaluations and reflections, these courses have shown some positive experiences and suggested points for improvement of online language classroom in the future.

Keywords: Language Course, Online, Vietnamese, Culture, Adult Learning, Covid-19

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Introduction

There is an increased socioeconomic relationship and cultural exchange between Japan and Vietnam since 2008, after two countries signed the Japan-Vietnam Economic Partnership Agreement (MOFA, 2021). More and more people and companies from Japan goes to Vietnam for expanding their business while providing local Vietnamese with more employment opportunities and a working medium of Japanese language (Froese & Kishi, 2013). Furthermore, tourism and cultural exchange activities are also booming in both directions (Hoi & Cooper, 2020).

In Japan, foreign technical trainees, technical workers, and other work-linked visa holders saw a sharp rise. Among whom, number of Vietnamese students and trainees is increased drastically (Tran & Matsuura, 2020). As of the end of October 2020, 443,998 Vietnamese accounting for 25.7% of the total number of foreign workers in Japan, surpassing China (MHLW, 2021). Most of young Vietnamese, especially who come to Japan for work on trainee visas cannot communicate in Japanese at a sufficient business level. On the other hand, very few Japanese could speak Vietnamese at a sufficient proficiency level that could effectively communicate with Vietnamese. This mis-communication phenomenon poses a language communication gap between local Japanese and foreign workers (Zhang et al., 2021).

In recent years, the number of Japanese who are interested in learning Vietnamese language is rapidly increasing. This could be mainly due to the increased number of Vietnamese come to Japan for work and study, and vice versa, creating the needs for higher level of communication for business and exchange as well and for intercultural understanding. Vietnamese language courses, either academic or non-academic are being offered in Japan. Several universities in Japan (including Osaka University, Tokyo Foreign Languages University, Kanda Foreign Language University) already have undergraduate degree programs with major in Vietnamese language. Vietnamese language courses and private lessons are also being offered by numerous language centers and private tutors in Japan. Regardless of the purpose of learning Vietnamese, either for professional use or just for a past time, the need for learning Vietnamese language among Japanese still seems to be increasing (Multilingirl, n.d.).

Vietnamese is a tonal language with six tones. According to Foreign Service Institute, it is classified as Category III languages or 1100 class hours for English speakers (USDS, n.d.). Vietnamese language is characterized with its Romanized alphabet, mostly short, 1-2 syllable words, containing no gender, no verb conjugation, and almost no tense, and no plural forms. Vietnamese grammar seems extremely simple (SVO). Based on its historical evolution, Vietnamese language consists of many Chinese-based words. The key to learning Vietnamese is to practice its "pronunciation". There are 11 single vowels (Japanese has only 5 vowels), 3 diphthongs, and 19 consonants. For Japanese learners, being able to differentiate the overwhelmed number of different syllables of Vietnamese by tone, vowel and consonant at the beginner level is very challenged. Although, Japanese learners have some advantage in learning Vietnamese, since both languages have a significant number of Chinese-origin words in common, slightly differ in meaning and pronunciation.

Practicing pronunciation is the most difficult and tedious part of learning Vietnamese (Ishizaka, 2020). Even in the degree courses at Hanoi University of Vietnam National University, undergraduate students who major in Vietnamese almost take their first year only

for acquisition of pronunciation and basic grammatical items (Hanoi University, n.d.).

Vietnamese classes are offered widely in Vietnam for foreigners come to work or study about the country. Although an impressive number of learners entering these beginner courses, a very few remain to study after 1-2 month of study and very few learners could reach the effective communication level (Cu, 2017). Many quitted the class before they can master 100-200 basic vocabulary and some basic conversation patterns. For the learners who attended conversation classes, the most common reason for quitting Vietnamese class at the early beginning is to be bored by extensive pronunciation exercises. Losing motivation is believed to be the main reason for high drop-out rate among beginner classes.

There are already many kinds of textbooks for studying Vietnamese language available on the market. Some of the textbooks focus mainly on daily conversation or sentence patterns, while the others focus on grammar and pronunciation practice. However, although very well-written and supplied with audio CD, the learners seem to have difficulty to use these resources for self-study without attending a class and a constant conversation partner. Unlike studying English or Japanese, which have many standard testing and assessment systems such as TOEIC, JLPT etc., lacking such for Vietnamese language learners also make it challenging for continuing study.

At Tokushima University (TU), several non-credit courses for Vietnamese language were being conducted since 2018. These courses targeted not only students but also a wide scope of adult learners who wants to improve their understanding about Vietnam's culture along with some basic Vietnamese conversation skills for actual exchange activities. Many of the learners of these courses have experience traveling and work in Vietnam or involving with social activities with foreigners in Japan. Furthermore, there were also Vietnamese courses designed for students who are interested in learning more languages, gaining multicultural experiences and short-term study abroad.

In 2020, after the outbreak of Covid-19 pandemic, all courses had to shift into online platforms. The planned courses on Vietnamese language were also conducted online. By analyzing the results of courses on Vietnamese language and culture conducted at TU in 2020 comparing to the courses conducted in the previous year, this paper is aiming to explore: (1) effectiveness of application of teaching techniques in online classes such as videos, pictures, funny stories, crosswords, open-ended question, quizzes, online tests etc., (2) effectiveness of introducing socio-cultural elements related to history, national character, medical system, sightseeing, business, environment etc. in activating learners' motivation at the beginner level.

Method

This paper analyzes the results of the course "Basic Vietnamese language and culture" for students and general adult learners conducted online from August – September 2020. The course was designed and implemented as a non-credit course for beginner level of learners who have never learned the language before, or who already have some exposure to it. It was designed as a short course with a total about 22 class hours, divided into 11 lessons at the pace of 1-2 times per week, for a small group of less than ten participants.

The syllabus included topics of highly practical use with some flexibility, but generally arranged as following: (1) Time, month, day, year; (2) Seasons and weather; (3) Meals and

cooking; (4) Hobbies and arts; (5) House and family; (6) Body, hospital, and troubles; (7) History and modern issues; (8) National character and personality; (9) Shopping and goods; (10) City walk and sightseeing; (11) Review and final test. Each lesson was divided into the following parts: (1) Warm up and review; (2) New vocabulary with about 10 words; (3) Conversation patterns with about 1~2 patterns for practicing the new vocabulary; (4) Cultural knowledge (story, video, quiz, question etc.) which is mainly conducted in Japanese; (5) Test and review of test answers; (6) Wrap up and reflection; (7) Homework assignment including pre-recorded audio and pdf handout of the current lesson for self-review at home. The steps (2) ~ (4) was supposed to be repeated if there was time left.

This course including study materials and course syllabus were designed independently by the trainer while taking several beginners' textbooks as reference materials. No textbook was found to include socio-cultural elements as study tools. The materials and stories were chosen to fit the lessons' topic and objectives, then adapted by the trainer to a simplified text containing only basic vocabulary and grammar structure. Sources for socio-cultural elements are materials freely available from internet such as videos, pictures, news articles, research articles, icons etc. Major parts of the contents were developed and actually used for the offline course in 2019, then had been adapted again for online course in 2020.

This course was conducted online using Google Meet platform for lecturing and discussion, and Google forms for testing and evaluation. All lessons were prepared on PowerPoint for online screen sharing. Data for analysis was collected from entry questionnaire, observation of reactions of the learners during the course, contents of discussion, opinion exchange and reflection during classes, test results and final evaluation questionnaire and feedback from learners.

Results

Characteristics of Participants

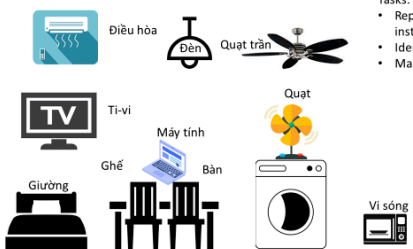
Participants were requested to apply online through link on a poster or from the recruitment homepage. Eight participants were recruited, including 3 university students (~20-year-old) and 5 general adult learners (40-70 years old) who are involved in teaching Japanese, social volunteer activities, and private business. All participants were native Japanese, having some English proficiency and a little experience of learning Vietnamese. The participants stated their purposes of learning Vietnamese for international exchange activities, travel and making business. By attending this course, participants expected to achieve some daily conversation and practical skills in Vietnamese, learn more about Vietnam including culture, national character, customs etc., and to know the differences of Vietnam from Japan.

Application of Teaching Techniques in Online Class

For the beginners, practicing pronunciation, listening and differentiate syllables that does not have corresponding sounds in Japanese is the most challenging part. At this stage, it is needed to build a basic vocabulary for practicing pronunciation and conversation. The number of new vocabularies for each session was limited to about five words or less, and several times of practicing speaking and listening those new words were ensured before it could go to the next session. The following figures represent the slides used during the online class. For each lesson, the participants were introduced to new vocabulary and basic expressions related to a theme.

In room this have what
 中 部屋 この ある 何
 Trong phòng này có gì?

Using Icons



Tasks:

- Repeat after the instructor
- Identify a sound
- Make simple sentence

Figure 1: Introducing new vocabulary using visual icons.

Figure 1 shows a group of commonly available household commodities. The participants have tasks to repeat after the instructor every sound while look at the corresponding word in the slide. After doing this several times, participants were asked to identify the word corresponding to its sound pronounced by instructor. After that, participants were asked to read out the words and their pronunciation is corrected by the instructor. Finally, instructor introduced a sentence pattern and participants were asked to replace a word from the sample sentence using the vocabulary learned. Although looks simply, this exercise was very tedious for the beginners, taking time to focus on individual participants who lagged the process. For Japanese learners, it needs to focus on practicing the correct pronunciation of sounds such as “phở” (rice noodle) as all the vowels o, ô, ơ have the same sound “o” in Japanese. Another example, it takes a certain time to make a correct pronunciation of “bây giờ” (now) and “bảy giờ” (7 o’clock) since Japanese language can’t make difference between tones such as “bây” and “bảy”. Making difference between consonants such as “trứng” (egg) and “chợ” (market) was also sometimes difficult. During those exercises, younger students appeared to be more sound-sensitive since they could identify sounds and read out words faster and more proper than the older learners did.

Using Real life Photos

バドミントン
 Cầu lông



Tasks:

- Make comments about the pic
- Discussion
- Learn the word
- Make simple sentence

Figure 2: Introducing new vocabulary using real-life photos.

Figure 2 shows a slide using a real-life photo instead of icons. At first, participants had a task to make comments about the picture, then all participants can discuss what they were seeing. In this case, because only half of the photo was being shown, they should discuss on what was the man in the photo doing. The discussion could be made in Japanese, or English. Then as the full photo were uncovered, the whole group realized that the new vocabulary in question is “cầu lông” (badminton) which is a popular street sport in Vietnam. Then participants worked on cognitive learning of the word and making sentences using the word,

as described previously. Through this kind of exercise, street life culture of Vietnam is subtly introduced to learners. In class, participants often gave very positive responses to this kind exercise in case the photo was the topic of their interest.


Quiz

In Vietnam boardgame popular what
 で , ボードゲーム 人気 何 ?
 Ở Việt Nam, môn cờ phổ biến là gì?

cờ lật




cờ vua




Tasks:

- read out the word
- Identify the word by sound
- answer the quiz
- discuss the quiz

cờ tướng



cờ tướng Nhật



cờ vây




Figure 3: Introducing new vocabulary and cultural topic using quiz.


Figure 3 shows new vocabulary introduced in the form of quiz. Tasks were assigned to the participants to read out the question and the choices, then to identify the words by sound, then to answer the quiz and to discuss the topic in Japanese. Like the above, some participants could be activated by this kind of exercise in case the topic (boardgame) was attractive to their interest.

Wrestling

Using Videos

レスリング
Vật

• <https://www.>



Task: learners should try to identify the sound "Vật" (wrestling) while watching the video.

Figure 4: Introducing new vocabulary and cultural topic using videos.

Figure 4 shows new vocabulary introduced in the form of video. Tasks were assigned to the participants to watch the video while trying to notice as many times as possible the sound "vật" (wrestling). Then the participants were asked to discuss topic of the video in Japanese. Like the above, some participants could be activated by this kind of exercise in case the topic (traditional Vietnamese wrestling) attracted their interest.

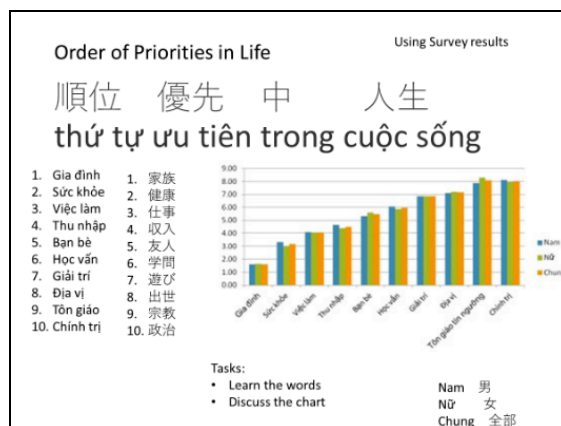


Figure 5: Introducing a social topic with vocabulary.

Figure 5 shows a new variant for introducing new vocabulary. Taken for example a recent survey about the priorities in life of young Vietnamese, which is freely available on internet, the content is simplified by instructor. The tasks given were like previous exercises, ask the participants need to spend sometimes to learn the new words. Then the participants were asked to discuss the survey results in Japanese, comparing with what young Japanese people may think about their priorities. Addressing a modern social topic, such an exercise was received very good feedback from participants, since it could help to understand the mentality and behavioral patterns of Vietnamese people.

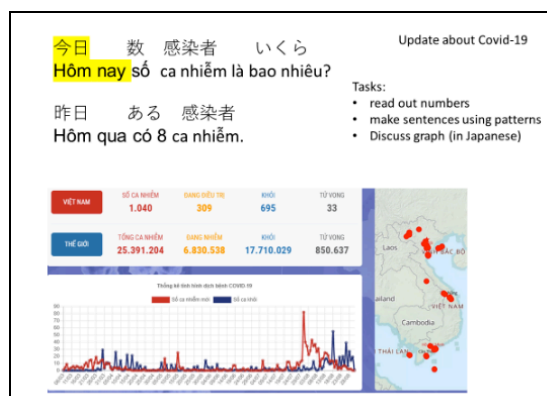


Figure 6: Exercise for reading numbers with a Covid-19 topic.

Mastering numbers was one of the learning goals that the learned were expected to achieve during this course. Figure 6 shows a new variant for practicing numbers. As Covid-19 was the topic of concerns for most of the people, the instructor cited the number of new infected or patients under treatment in Vietnam extracted from the news then showed it to participants on a slide. The participants had to read out the numbers, then make sentences using provided patterns. In the final discussion in Japanese, they were asked to make comment to the graphs, discuss about the situation of Covid-19 in Vietnam, and to compare that with the world and with Japan. This exercise was considered informative by the participants.

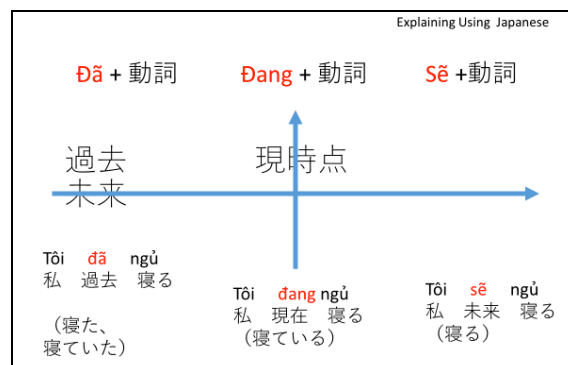


Figure 7: Explaining tenses in Japanese.

Japanese was used as language of instruction for conducting this course. Considering the beginner level of the participants, basic Vietnamese grammar was explained by the instructor in Japanese, to make the participants to understand in a fastest and thoroughly way. Figure 7 was used to explain about how to construct sentences with past, present, and future tenses. The participants’ feedback had shown that basic Vietnamese grammar was well understood as it has some similarity with English, and most of participants had no problems of composing simple sentences following a grammar pattern.

Figure 8: Using English helped to better use of grammar patterns.

Although the instruction is provided in Japanese, some sentences patterns was made in English due to its structural similarity to Vietnamese and make the participants to understand it easier. In figure 8, examples of sentences in English were used for comparison with Vietnamese since English has the same order of SVO as Vietnamese. As feedbacked by some participants, using English example sentences made it easier to understand. Even, it might be no problem if the course had been explained fully in English as a language of instruction.

Applications of Socio-cultural Themes

In this course, socio-cultural elements were introduced on purpose with a goal to provide the knowledge on the socio-cultural context of the language formation and application from history to the modern social issues. It was also aimed to enhance the participants’ motivation and active learning atmosphere during the course. Socio-cultural themes were introduced systematically in accordance with the lesson’s content, including history, tradition, traditional arts, etymology, ethnicity, culinary, national character, medical system, sightseeing, business, social issues etc. These elements were adapted into simple Vietnamese for the participants to practice new vocabularies and grammar patterns. The order of themes was introduced selectively with minimal vocabulary and basic conversation pattern so that the participants

can memorize and practice within the context. Starting from history and tradition of Vietnam, the participants were introduced into the evolution process of the modern Vietnamese language and what does it have in common with Japanese language. Furthermore, the participants were introduced to the characteristics of Vietnam's culture which share many similarities with Japanese. Understanding the language evolution and comparative features between the two languages and culture was making mastering Vietnamese language easier for Japanese speakers.

昔話 かまど神様
Sự tích Ông táo
Story of Kitchen gods

昔 夫婦 長い間 無い 子ども
 • Ngày xưa, có 2 vợ chồng đã lâu mà không có con.

• ある日 夫婦 喧嘩 妻 怒る 家出
 • Một hôm, vợ chồng cãi nhau, vợ giận bỏ nhà đi.

• やっと、妻 1 男性 別 仕事 ハンター
 • Cuối cùng, vợ lấy một ông khác làm nghề đi săn.

Using mythology



Tasks:

- Read out, check pronunciation, intonation
- Learn vocabs
- Discuss the story (in Japanese)

Figure 9: Introducing mythology via reading exercises.

Mythology and fairy tales were powerful sources for conveying traditional values hidden behind the language. The instructor selected well-known and simple stories for adaptation. Figure 9 shows one of the most popular mythology – the story of kitchen gods. The participants were given tasks to read out the story when the instructor correct their pronunciation and intonation. After learning the vocabularies, the participants discussed the story and values from the perspective of Japanese culture. Interestingly, some of the participants had found similar stories from other oriental cultures. When comes to traditional culture, many people are interested in traditional music and musical performance, festivals, sports, architecture, and visual arts throughout the history. In this course, selected videos and pictures were chosen by the instructors to cover the most typical parts of these topics. For each session, participants listened to a short lecture in Japanese followed by a list of new vocabularies related to the theme. Then they watched a short video of 1-2 few minutes, then made discussion on the theme and pointing out some similarities with Japanese culture.

なぜだらけゴミ?
Vì sao toàn rác?



Figure 10: Open-ended question on a social issue.

Besides traditional culture, this course was also explored interest of participants about the modern social issues such as pollution, bullying in schools, corruption, bubble economy, superstition etc. Specific stories about these social emerging issues were selected from the news, books, media written in Vietnamese which attracted high attention of Vietnamese

society recently. The instructor adapted these stories for the language learning purpose. Figure 10 gives an example about garbage issues that attracted a lot of social attention in recent years. The participants were asked to comment about the pictures and discuss about the causes and solutions, as well as to find if there were similar issues in Japan. This kind of problem-based approach made the participants active and became more interested in learning about Vietnam, adding a motivation for continuing learning Vietnamese language.

Using anecdotes was one of the best strategies used during this course for teaching culture in both traditional and modern senses. Vietnam is known with its rich repertoire of anecdotes, a country where people enjoy telling anecdotes, as they often making fun of their own bad habits or behaviors, such as being too stingy, short-sighted, pragmatic, tricky etc. Anecdotes, both old and new, were considered by the participants as very interesting but useful tools to understand about Vietnamese national characteristics. Especially, when an anecdote was left open-ended and the participants were asked to guess the end of the story, in most of cases no participant could guess it. Furthermore, most were deeply surprised by the way Vietnamese people making joke.

The results of the final test applied at the end of the course showed that the participants practically had gained some progress in language skills. Besides being able to make basic greetings, they could retain about 50% (about 100 words) of the vocabularies introduced during the course, being able to make conversation based on several patterns, and being able to differentiate some syllables that does not exist in Japanese. Moreover, participants gained some intercultural knowledge and awareness, as well as multilingual mentality and reflex. Two third of the participants said that it is no problem if English is the language of instruction. Finally, they gained some self-study motivation and ability to self-study using the available resources.

Discussion

The course “Basic Vietnamese language and culture” is a preliminary attempt to pilot a short course on an ethnic language as L3 at university settings. For the participants to master new vocabularies, numerous repetitions of pronunciation and many short review sessions are necessary. This course has shown that the contents used offline techniques can be well applicable into online mode, including reading exercise, introducing traditional music via videos, vocabulary building using videos, pictures, anecdotes, crosswords, quizzes, multiple choice questions, open-ended question, online test for assessment and evaluation. Generally, these techniques were well perceived by the participants and contributed to improving their interest and motivation stay active during lessons. There was no significant difference when conducting the course online from offline classroom. Comparing to the offline version, participants of an online class may achieve equal results as offline class. However, inability of standard tests for Vietnamese language, especially for pronunciation part make it difficult to quantify the achievement. The final evaluation results show that most of the participants prefer online or hybrid classroom over offline.

Integrating teaching a foreign language with its corresponding culture is a common approach to target students as adult learners (Neff & Rucynski, 2013). In this course, incorporating socio-cultural elements to the language contents was shown to be a good strategy to enhance the participants’ motivation and engagement. These exercises, alternating with the core language exercises, may activate the participants to brainstorm and orientate outside their habitat using their knowledge and experiences in order to find solutions for problems or to

guess the behavioral patterns in certain situations. Facilitating these sessions according to principles of adult learning and critical thinking seem to be effective for the participants to become more curious about the new socio-cultural settings that they may want to discover with their new language skills (Igarashi, 2018). Surprisingly, in this course, participants seem to interest more on modern socioeconomical themes and modern anecdotes than the traditional ones.

Covid-19 challenges the education to switch from face-to-face classroom to online platform. It may take a lot of time to prepare for an online session (Cavanaugh, 2005). Certain amount of time needs to be spent on making slides, pre-recorded videos, pdf handouts, composing quizzes, tests, crosswords etc. This course has demonstrated that although preparation process has been time-consuming, there have been no clear obstacles observed during the process of using the said teaching techniques in online mode. Provided the small number of participants (ten at the maximum), the teacher-learner interaction and learners' reactions can be well controlled. It is easier to observe and pay attention individually in the offline class. With the online mode, it may become difficult to assure the class quality with a greater number of participants. Moreover, it has been found to be difficult for instructor to have a good control of the class for techniques such as pair-work, small group discussion, role playing, because these exercises required to breakout the whole class into small breakout rooms. Good interaction among participants also seems difficult to achieve in the online mode. Lastly, it is difficult to conduct a writing practice session in online settings.

Conclusion

In summary, this paper analyzes and shows some lessons learned from the course “Basic Vietnamese language and culture” targeting university students and adult learners conducted at the TU. Through this course, a wide range of methods and materials has been applied, and the participants have been introduced to new vocabulary and basic expressions related to socio-cultural themes. The results show some experiences that could be served for improving language classroom quality in the future. It shows that integrating culture into language teaching at the beginner level could be an effective approach targeting university students and adult learners who already have some learning experience and reasons for learning. Moreover, this approach may be applied effectively in the online classroom by using various techniques alternatively for improving learners' engagement. Although there are some limitations of the online mode, it may stay firmly as an equal option to the traditional offline classroom in the future. Considering the increasing number of foreign workers coming to Japan, this experience with Vietnamese language implies that there is a need for learning certain ethnic languages in Japan for cultural exchange and business purposes. Languages such as Indonesian, Thai, Nepalese, Burmese, etc. may become the language in need. Promoting such ethnic courses could contribute to diversity, multiculturalism and internationalization and regional development of Japan.

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Contact email: tran@tokushima-u.ac.jp

Improved Fluency through the Timed-pair-practice Framework

Jason Pipe, Tokyo Keizai University, Japan
Teruaki Tsushima, Tokyo Keizai University, Japan

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Abstract

Determining proficiency of students by one type of fluency measures is insufficient. By using a triad of fluency measures, two cohorts of low-intermediate Japanese students (N=12) were continuously analysed over one year in which a noticeable improvement in fluency occurred as a result of the inclusion of the Timed-Pair-Practice framework into the classroom. Furthermore, it was observed that certain patterns emerged in relation to speech production and the proficiency of the speaker. First, it became apparent that less proficient learners generally paused more repeatedly and had longer periods of silence while speakers who progressed in their fluency, seemed to increase the number of filled pauses to maintain their utterances and relied less on repeating phrases. Second, less proficient speakers paused more frequently at within-clause boundaries as they formulated their sentences while speakers who improved their speech production, naturally altered the pause location to between-clause boundaries to reflect a more native-like speech production. This would suggest an improvement in the quality as well as the quantity of speech output as the students progressed. However, when compared to native speakers (N=13), there were two noticeable differences in regards to pause location. At the between-clause boundary, non-native speakers clearly paused before pronouns while native speakers paused before conjunctions. At the within-clause boundary, non-natives paused predominantly before noun phrases while native speakers paused more on adverbial phrases. To further improve fluency, this paper recommends teaching that incorporates activities that encourages parallel processing (Levitt, 1989) to reduce the grammatical challenges faced by the L2 speakers.

Keywords: Fluency, Pause, Breakdown, Repair, Parallel Processing, Timed-Pair-Practice

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Intorduction

Measuring fluency has always been an important aspect of determining student proficiency (Fulcher, 2003) and heavily researched as it is an essential component of communicative language ability (Tavakoli, 2016) as well as an important descriptor of L2 development (de Jong et al., 2012). In a broad sense, this concept can be seen as an equivalent to overall speaking proficiency (Chambers, 1997). In a narrow sense, fluency considers more concrete and measurable features such as breakdown, speed and repair (Tavakoli & Hunter, 2018). This paper considers the broad definition of fluency as being the ability of producing language at an adequate speed with relative ease and less hesitation (Tavakoli et al., 2020) but also follows a narrow sense for research purposes.

When understanding how L2 fluency should be analysed and represented, it is necessary to make the distinction between cognitive, perceived and utterance fluency. As this paper looks closely at Japanese students' fluency over one year, research follows the widely investigated third domain known as utterance fluency (Segalowitz, 2016). This would relate to the acoustically measurable aspects of fluency in uttered speech such as speed, pausing (breakdown), and repair (Kahng, 2014; Kormos, 2006). Fluency in this paper has been evaluated through a combination of these measures (Tavacoli et al., 2020) to determine fluency over one academic year and how this changed with proficiency over the year.

To determine utterance fluency, it was essential that students made every effort to maintain conversation in their English classes. A new and bold framework, Timed-Pair-Practice (TPP), was introduced into the classroom to re-orientate students in performing their paired-tasks and thereby stretching their English abilities lexically, morphosyntactically and phonologically and build their repertoire of resources to manage in paired conversation. Furthermore, the repetitious nature of the tasks performed through this framework follows research as to having the most robust effects on L2 fluency (Lambert et al., 2017; Wang, 2014). However, despite the advantages of this framework, up to now, there has been no study on fluency development through the TPP framework. This study, therefore, looks closer at how students' proficiency progress through speed, breakdown, repair, and composite measures.

To unpack, understand and appreciate the complexities of speech production and the conceptualizing of fluency for non-native speakers, Levelt's (1989) four-stage speech model illustrates how language is processed and produced (Kormos, 2006; Segalowitz, 2010; Tavakoli et al., 2020). L1/fluent speakers focus on the first stage in which speech is conceptualized through planning the upcoming utterance. For the lower leveled L2 speakers, however, sizable processing resources are required for three other stages: the formation, articulation, and self-monitoring stages. The formulation stage draws attention on lexical, grammatical, morphophonological and phonetic encoding; the articulation stage refers to the linguistic planning of the actual speech within the constraints of the targeted language; and the self-monitoring stage checks for accuracy, clarity and appropriacy (Tavakoli *et al.*, 2020). Dysfluencies occur during these latter stages as the speaker's utterance moves through this slow and conscious *serial processing* system to find the appropriate phrasing to match the original intention, form or sound required and thus resorting to pausing, slowing down of speech or using filled pauses to maintain conversation (Tavakoli, 2011).

With the inclusion of TPP in classes, it is hoped that students will begin to develop strategies to automate their speaking production when stretching themselves to communicate in their

conversation. For L2 learners, their lexical, syntactic and phonological knowledge is still emerging and therefore, cognitively demanding. With effective preparation, repetition of tasks and format used in TPP, students will develop the notion of *parallel processing* (Kormos, 2006, Lambert et al., 2020, Skehan 2014). This processing is where students become able to work on two or more stages of speech production simultaneously as one aspect of production, such as the conceptualization and formulation stages or the automation of encoding processes. This progression in L2 proficiency will hopefully lead to less frequent pausing and other dysfluencies while encoding utterances in real time (Lambert et al., 2020).

Previous research informs us that L2 learners generally speak slower and with more effort than when conversing in their native tongue (Derwing et al, 2009) and unsurprisingly lower leveled L2 speakers are less fluent and often dysfluent in speak production (Kormos, 2006; Mora & Levkina, 2017; Segalowitz, 2010). Skehan et al. (2016) go further to suggest that the pause location reflects the stages of Levelt's model of speech processing and production. In other words, the less proficient speakers have more mid-clause pauses (non-clausal boundaries) in their conversations as this would be typical behavior at the formation stage while end-clauses (between-clausal boundaries) occur more often from the more proficient speakers as they need to consider speech production mainly at the conceptualization stage (Kormos, 2006; Lambert et al. 2017; Saito et al., 2018; Skehan & Shum, 2017; Tavakoli & Wright, 2019). This paper looks closer at the accuracy of this hypothesis.

However, there would appear to be some gaps in the research that this paper attempted to address. Previous research mainly provided non-longitudinal evaluations to determine fluency of student proficiency by sampling their communicative tasks over a short period of time (e.g. Lambert et al., 2017; Saito et al., 2018; Tavakoli et al., 2020). There is little information regarding how the above hypothesis holds true over a longer period of time. Would there be a movement on pausing from non-clause boundaries to between-clause boundaries as the student improves their level of speech processing and production? Nor has there been research that investigated how the students will use repair strategies to maintain conversation when they start to gain confidence and become more proficient in exploring and experimenting in their spoken language discourse. Finally, to the best of our knowledge, there is little data on the locations of pauses in terms of syntactic structures (e.g., between- or within-phrase boundaries) or on the parts-of-speech of the lexical items that follow the pauses. To fill in these gaps, the present study attempted to focus on the following specific research questions:

1. How did the utterance fluency (i.e., speed, breakdown, and composite measures) improve among the L2 speakers of English over the academic year?
2. As L2 learners became more proficient, did they rely less on pauses and use more repair in their spoken utterances?
3. Did lower L2 learners generally pause more repeatedly in the middle of clauses than more proficient speakers who paused more often between clauses and did this change as the student became more proficient?
4. Were there significant differences in the syntactic locations of between-clause and within-clause pauses among the more/less proficient speakers and native speakers, and how did the result change over time?

5. Were there significant differences in the proportion of parts-of-speech of the lexical items following between-clause and within clause pauses among the more/less proficient speakers and native speakers, and how did the result change over time?

Fluency Measures

The fluency measures (Appendix 1) used in the present study consisted of speed measures (i.e., articulation rate, the mean length of runs), a composite measure (i.e., speech rate), breakdown measures (the level of pausing which disrupts the flow of speech), and repair (strategies used to correct or reformulate the speech). These measures served to investigate the complex nature of fluency (de Jon et al., 2012; Kahng, 2014; Kormos, 2006; Skehan, 2015), and provided not only an informed perspective of the underlying speech production processes but a more reliable understanding of the underlying characteristics of fluency at the varying proficiency levels of students (Tavakoli et al., 2020).

In the present study, a pause was defined as a silent period of 250ms or longer. Pausing varies between speakers (Derwing et al. 2009) but in relation to second language acquisition, there is a clear distinction between pauses made by L1 and L2 speakers. L2 speakers would make within or non-clausal boundary (NCB) pauses so as to monitor and reformulate their message during the formulation stage (Skehan & Shum, 2017; Tavakoli & Wright, 2019) while L1 speakers tend to make between-clausal boundary (BCB) pauses as they generate a pre-verbal message (Kormos, 2006; Lambert et al. 2017; Saito et al., 2018; Skehan & Shum, 2017; Tavakoli & Wright, 2019). Appendix 2 provides the formulae to determine the mean length and frequency of NCN and BCB. In addition, to raise further awareness of the cognitive demands the L2 speaker faces of these aspects of L2 language production at the formulation stage, this paper will attempt to look closer at these encoding issues by analyzing the pause types within the sentence (Table 1).

Table 1: Frequency of Pause Types within the Sentence

Pause Type	Details	Examples
Clause Boundary (PS) (Freq of PS/100 Syllables)	The clause ends ... pause ... another clause, conjunction, adverbial phrase	I went to a restaurant ... I had dinner. The other day ... I went to work. I like working ... because I get money. ... and ... I went to school.
Between Subject and Verb (PR) (Freq of PR/100 Syllables)	Before the Predicator, but following subject or other initial items	I ... drove the car. The man in a car ... called me . I ... seldom ... use a mobile phone. I wanted to study but ... went out instead.
Phrase Boundary (P) (Freq of P/100 Syllables)	At group-boundaries elsewhere within the clause	I watched ... a movie. I listened ... to a story. I like to play ... baseball.
Within-Phrase Boundary (PW) (Freq of PW/100 Syllables)	Noticeable pausing within phrases after PR	I have a beautiful ... cat. This book is very ... good.
Within-Prepositional Phrase Boundary	Noticeable pausing within prepositional	I went to...the shops. I waited for 2 minutes.

(WP) (Freq of WP/100 Syllables)	phrases after PR	
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Methodology and Methods

Participants

The participants were 12 first year students from a private university in Tokyo. Their English ability was categorized as low-intermediate to intermediate despite having a minimum of six years of learning. These participants were divided into two groups depending on their initial speaking ability during the interview and TOEIC scores. The fast group demonstrated greater confidence and fluency while the slow group had less experience in conversational English. Both sets of data were contrasted with a control group of Japanese students who attended a general English communication class which did not include instruction using TPP and a native group of English speakers.

Timed-pair-practice Procedure

The students were required to prepare 20 questions on a topic chosen by themselves and a 250-word response to this topic. The aim was to provide topics that students genuinely had an interest in (Porter, 1999) so that they would be more motivated to invest their time and converse their ideas with their peers in the classroom. These students were then expected to ask these questions in pairs in the practice stage. After subsequent rounds, the students became able to ask more appropriate questions and maintain longer conversations. After sufficient practice, students were then evaluated in the testing stage in which two students, picked at random, would be asked to provide another conversation on the same topic chosen.

Data Elicitation

In total, the data of 20 recordings were obtained during the academic year consisting of two semesters. Students performed a weekly narrative production task which consisted of a one-minute spontaneous monologue explaining what happened in each student's week. Dialogue recordings were not considered due to issues arising over the complex pragmatics involved in measuring the interactive aspect of dialogues such as unclaimed pauses between turns, overlap, and interdependence of the interlocutor's performances (Tavakoli, 2016). Due to simplicity and reliability, it would, therefore, be prudent to analyse individual narratives to measure each student's spontaneous speaking ability.

All student utterances were recorded at a resolution of 16 bits with a sampling rate of 44.1 Hz by a PCM recorder through a high-quality microphone placed approximately 20cm from the mouth of the speaker. This data was transferred to a computer in which the recorded sounds were low-pass filtered at 8,000 Hz, normalized, and analyzed by sound analysis software, *Praat* (Boersma & Weenink, 2014).

Analysis Procedure

For expediency, only the recordings taken from the odd weeks were analysed. These recordings were transferred onto a digital format, in which the second author transcribed a sampled one-minute speech and match each lexical item to the recording on the software,

Praat. Then, the acoustic data were segmented into consonants, vowels, and pauses, and duration of each portion was measured.

Results

Speech Rate

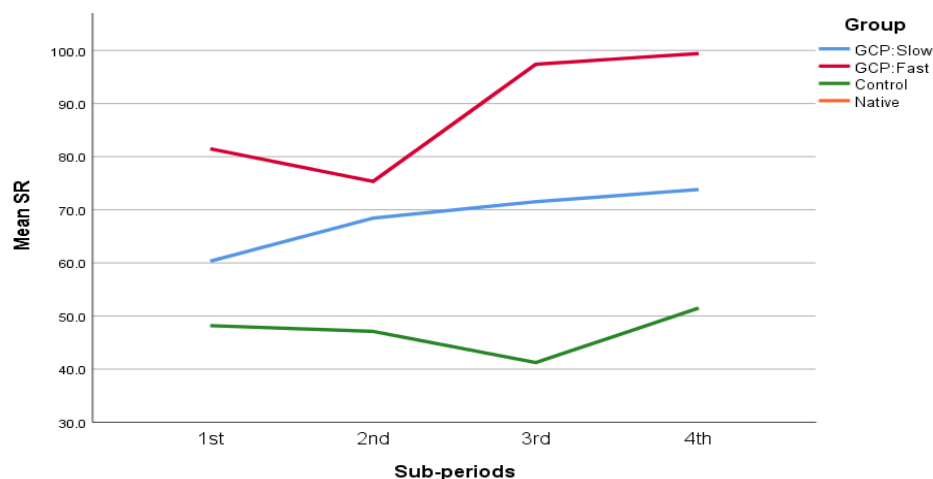


Figure 1: Speech Rate of Slow, Fast and Control Groups

As is shown in Figure 1, both the slow and fast groups showed fair gains (60.3 syllables/min to 73.8 syllables/min and 81.5 syllables/min to 99.4 syllables/min respectively). On the other hand, the control group showed no clear improvement by fluctuating from 48.2 syllables/min to 51.5 syllables/min. However, despite such progress, the native group spoke at a much faster rate of 200.8 syllables/min.

Articulation Rate

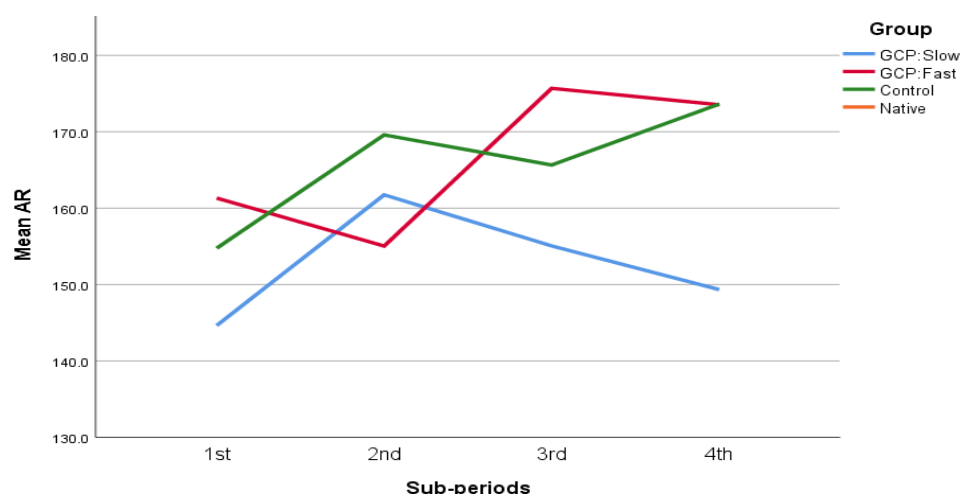


Figure 2: Articulation Rate Performance of Slow, Fast and Control Groups

As shown in Figure 2, however, articulation rate shows a less clear picture. The slow group showed strong improvement from the first quarter of 144.6 syllables/min to 161.7 syllables/min in the second quarter but then continued to drop to a level of 149.3 syllables/min by the final quarter which indicates only a marginal improvement overall. The control group, however, was able to increase their articulation rate from 154.8 syllables/min

to 173.6 syllables/min over the academic year. Although this would imply improvement, it also enlightens us on the fact that the control group used longer pauses in their utterance to formulate and plan their utterances (as reflected in their lower speech rate). The fast group, on the other hand, was able to improve their articulation rate as well as their speech rate from 161.3 syllables/min to 173.5 syllables/min. However, compared to the native group's data of 256.7 syllables/min, articulation rate for the non-native groups was considerably lower.

Mean Length of Runs

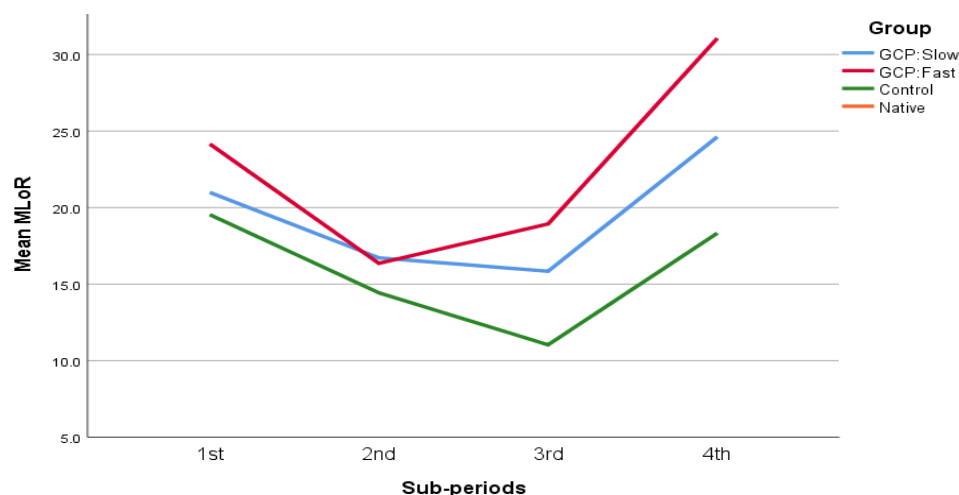


Figure 3: Mean Length of Run of Slow, Fast and Control Groups

Figure 3 indicates a u-shaped curve in which all groups in fact reduced the length of their runs initially to maintain their speech production. Data from the first quarter recorded artificially longer monologues due to unnatural formulaic expressions to maintain utterances. These runs shortened by the second quarter as students searched their limited language resources to express themselves. However, as students developed their English abilities and absorbed language taught in class in their courses, their length of runs rapidly improved. The fast group dropped from 24.2 syllables/run in the first quarter to 16.4 syllables/run but made increasingly lengthier runs afterwards resulting in 31.1 syllables/run in the final quarter. Both the slow and control groups reduced their speech runs at a diminishing rate from the first quarter to the third quarter, 21.0 syllables/run to 15.8 syllables/run and 19.5 syllables/run to 11.0 syllables/run respectively. In the final quarter, both groups, however, showed rapid improvement with 24.75 syllables/run for the slow groups while the control group reached run of 18 syllables/run. However, despite improvement by all groups in the latter half of the year, the native group's mean length of run was longer at 35.3 syllables/run.

Pause Ratio

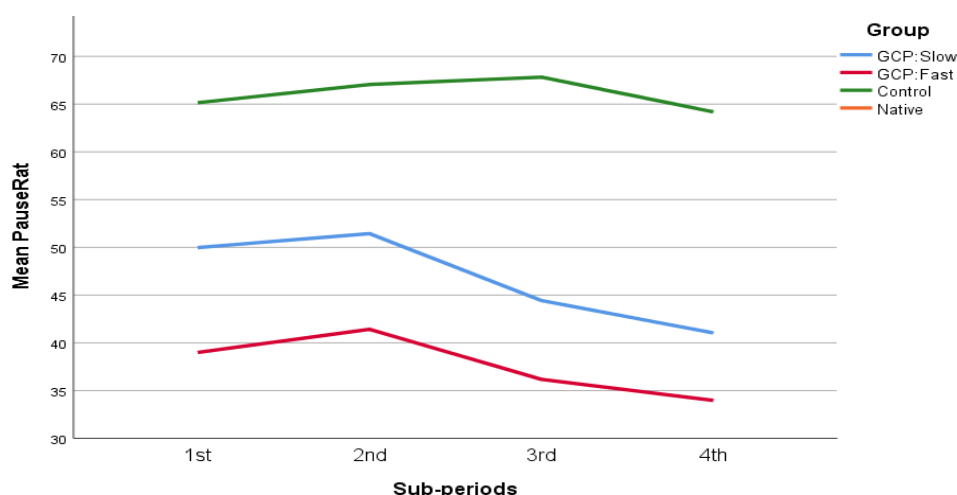


Figure 4: Mean Pause Ratio of Slow, Fast and Control Groups

As shown in Figure 4, pause ratio would also appear to indicate a clear progress by both the slow and fast groups from the second quarter onwards, despite slight gains at the beginning. The slow group’s mean pause ratio began at 50% and increased to 51% by the second quarter and then fell to 41% by the end of the final quarter. The fast group showed a similar pattern with an initial mean pause ratio of 39%, jumping up to 41% in the second quarter and then dropping over the next two quarters to reach 34% by the end of the fourth quarter. However, despite progress made by the slow and fast groups, the rate of pausing was much higher than the native group of 14%.

Repairs

1. Filled Pauses

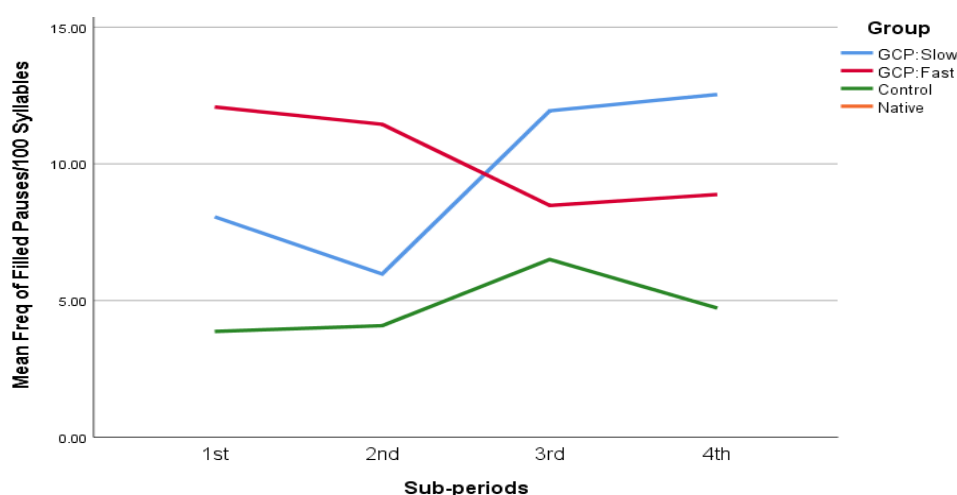


Figure 5: Multiple Line Mean of Frequency of Filled Pauses/100 Syllables of Slow, Fast and Control Groups

It is noted that the control group relied on filled pauses to maintain their monologues the least throughout the whole period (see Figure 5). The fast group used this strategy the most in the first half of the year but relied increasingly less on using it. In the first quarter, this group

averaged 12.1 filled pauses/100 syllables and this fell to 8.9 filled pauses/100 syllables by the end of the fourth quarter as this group became more proficient in their English and, therefore, able to communicate more expediently their point of view. The slow group, on the other hand, became the dominant user in this strategy, using 8.1 filled pauses/100 syllables at the beginning of the year but 12.5 filled pauses/100 syllables by the fourth quarter. There would seem to be a clear indication that both the slow and control groups used this strategy increasingly more due to limitations in their spoken English. The native group relied seldomly on this strategy using 4.9 filled pauses/100 syllables.

2. False Starts

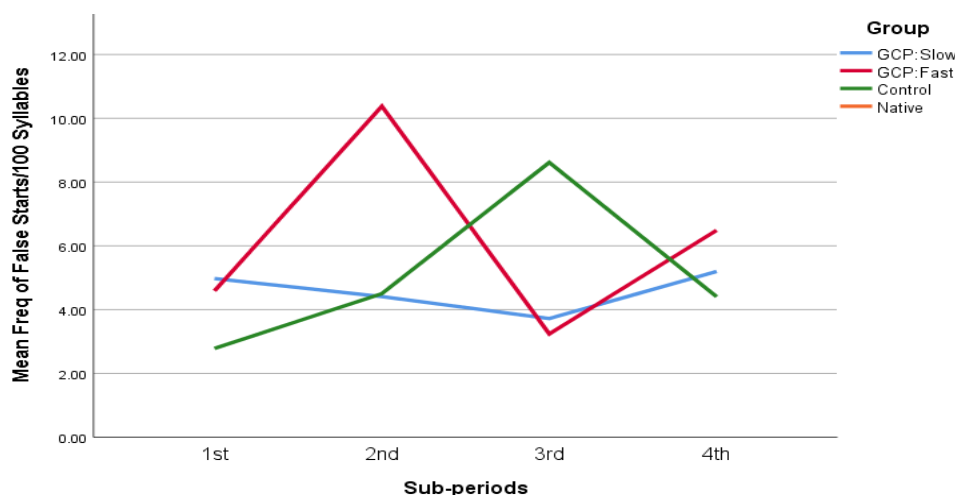


Figure 6: Multiple Line Mean of Frequency of False Starts/100 Syllables of Slow, Fast and Control Groups

As shown in Figure 6, false starts would seem to be less insightful as each group, overall, made about the same number of mistakes. The slow group would appear to have been the most consistent in their use of false starts with the least marginal changes: 3.72-5.20 false starts/100 syllables. The marginal changes of the other groups were considerably higher: the fast group ranged 3.24-10.38 false starts/100 syllables, and the control group ranged 2.78-8.62 false starts/100 syllables. We can infer that none of the groups have strong control over their accuracy or appropriate vocabulary choice and this would be due to individual differences. This can be confirmed by looking at the results of the native group which had greater control in their utterances spoken and, therefore, made an average of 1.3 false starts/100 syllables.

3. Repeated Words

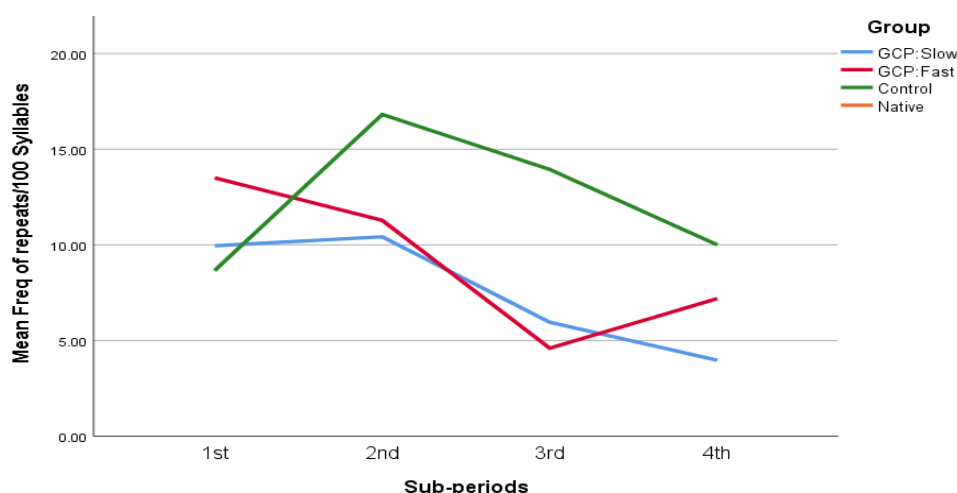


Figure 7: Multiple Line Mean of Frequency of Repeats/100 Syllables of Slow, Fast and Control Groups

Finally, despite slight relapses, there would appear to be less reliance by the slow and fast groups to repeat words to maintain their fluency (see Figure 7). The fast group used 13.5 repeats/100 syllables in the first quarter, and this fell to 7.2 repeats/100 syllables by the final quarter. The slow group made 10.0 repeats/100 syllables at the first quarter and this dropped to 4.0 repeats/100 syllables by the fourth quarter. Despite the reduction in repeated words, native speakers hardly used this strategy with only 1.30 repeats/100 syllables.

Pause Location within the Unit of Spoken Language

1. Pauses at Non-clausal Boundaries

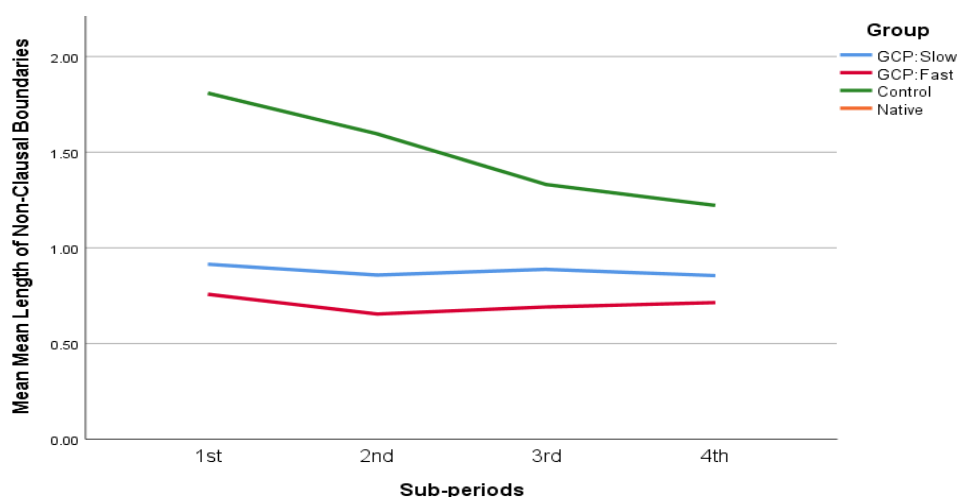


Figure 8: Multiple Line Mean of Length of Non-clausal Boundaries Pausing of Slow, Fast and Control Groups

As Figure 8 shows, the control group made constant progress by reducing the length of pausing at the non-clausal boundaries (NCB) from 1.81 seconds in the first quarter to 1.22 seconds by the fourth quarter. The slow and fast groups seemed to have made no improvement in the length of NCB, from 0.91 secs to 0.85 seconds and from 0.76 seconds to

0.71 seconds, respectively. However, the mean pause length of the control group was around double that of the other groups and so a reduction was expected. The native group length of NCB pausing was at 0.55 seconds.

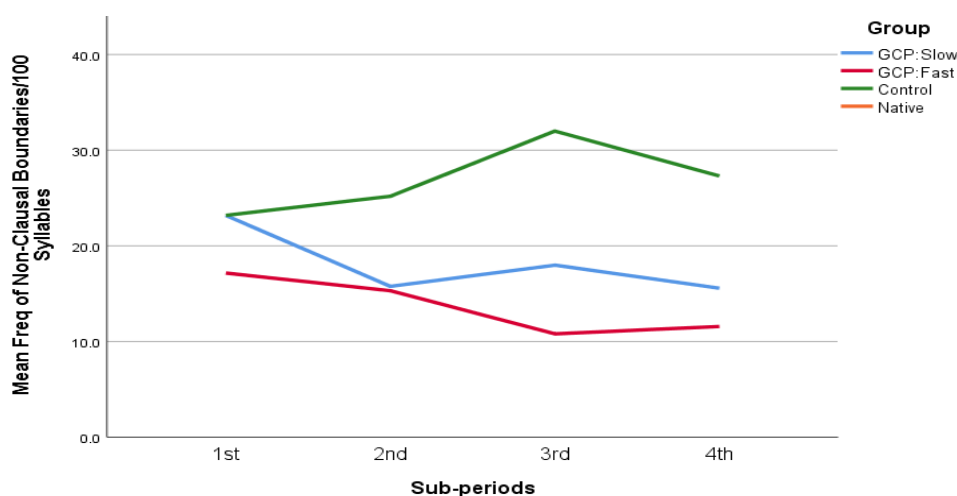


Figure 9: Multiple Line Mean of Frequency of Non-Clausal Boundaries Pausing/100 Syllables of Slow, Fast and Control Groups

However, unlike the control group, both the slow and fast groups managed to reduce the number of NCB pauses (from 23.2 to 15.6 pauses/100 syllables and from 17.2 to 11.6 pauses/100 syllables, respectively (see Figure 9). The control group, however, increased their average overall from 23.2 pause/100 syllables to 27.3 pauses/100 syllables. The native group was considerably lower at 2.5 pauses/100 syllables.

2. Pauses at Clausal Boundaries

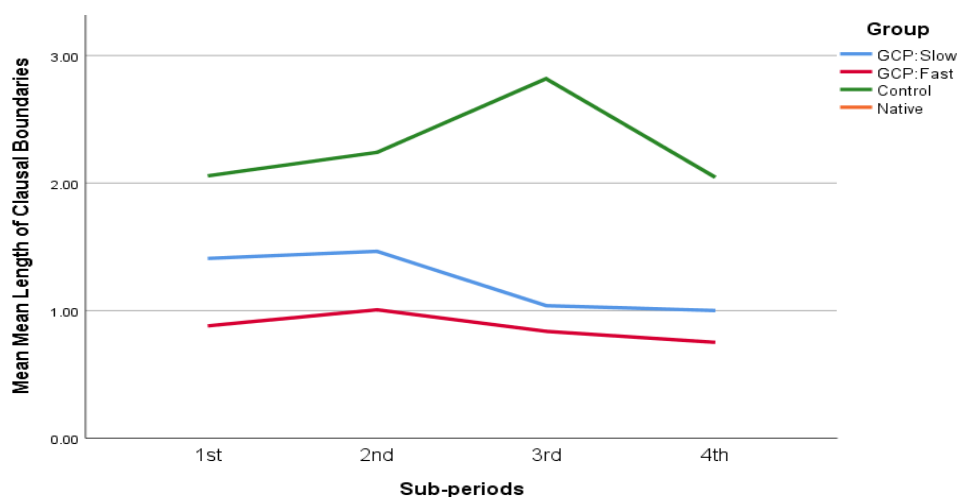


Figure 10: Multiple Line Mean of Length of Clausal Boundaries of Slow, Fast and Control Groups

As shown in Figure 10, while it is inconclusive to determine any improvement in the mean length of pause at between-clausal boundary (BCB) for the control group, both the slow and fast groups showed slight improvement (1.41 - 1.00 second and 0.88 - 0.75 seconds respectively). It might be deduced that the slow and fast group were becoming slightly

quicker at formulation stage of speech production. However, there would seem to be some way to go to match the fluency of the native group with BCB pauses of 0.62 seconds.

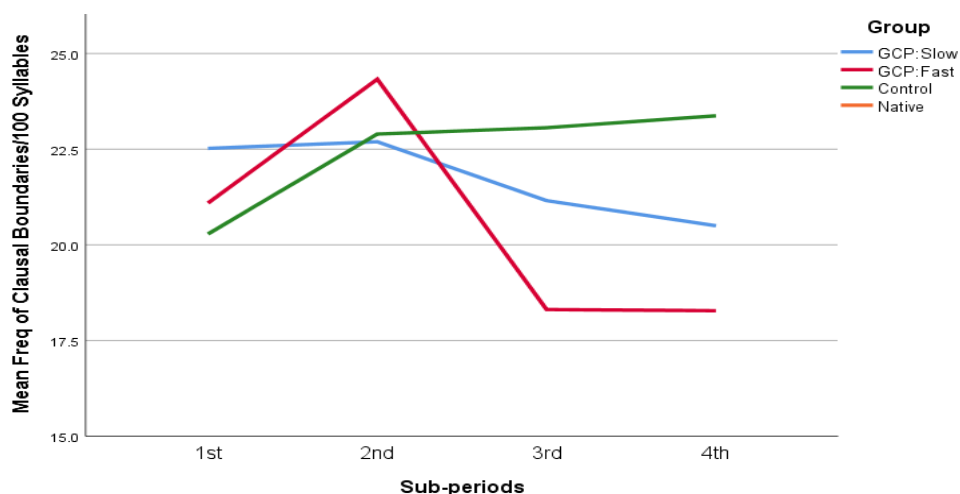


Figure 11: Multiple Line Mean of Frequency of Clausal Boundaries /100 Syllables of Slow, Fast and Control Groups

However, an interesting pattern emerged regarding the frequency of BCB pauses (Figure 11). Initially, the frequency of these pauses increased for all groups from the first to second quarter: the control group from 20.3 to 22.9 pauses/100 syllables, the slow group from 22.5 to 22.7 pauses/100 syllables and the fast group from 21.1 to 24.3 pauses/100 syllables. This trend may be as a result of a reduction in the frequency of NCB in the first half of the year. However, as the year progressed, the slow and fast group used BCB pauses less, resulting in 20.5 pauses/100 syllables and 18.3 pauses/100 syllables respectively by the end quarter. The control group showed continued to rely further on BCB pauses (as well as the NCB), ending at 23.4 pauses/100 syllables. It must be noted that the native group seldomly paused at BCB with a rate of 4.7 pauses/100 syllables.

3. Syntactic Locations of Pauses

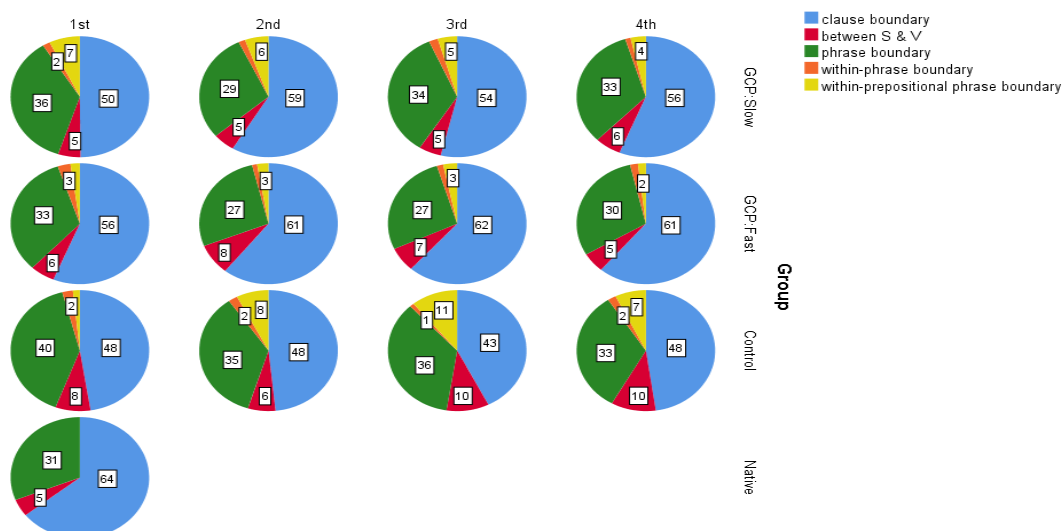


Figure 12: Percent of Pause at Sentence Level for Slow, Fast, Control and Native Groups

As shown in Figure 12, the proportion of the clause boundary was highest in the native group (64%), followed by the fast group (60.0%), the slow group (54.8%) and the control group (46.8%). This finding was consistent with the hypothesis that the less proficient speakers make more pauses in the non-clause boundaries. It is notable that the control group showed relatively high proportion of non-clause pauses at phrasal boundaries, between subject and verb, and within-prepositional phrases. These results indicate less control and more dysfluency among the less proficient speakers.

4. Parts-of-Speech of the Lexical Items Following Pauses

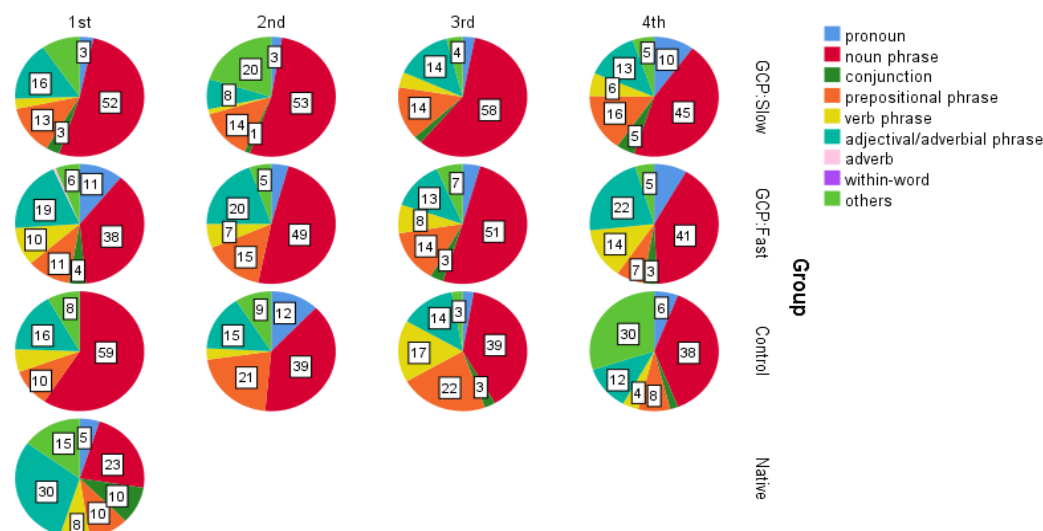


Figure 13: Parts-of-Speech of the Lexical Items Following the Non-clause Pauses for Slow, Fast, Control and Native Group

As shown in Figure 13, the fast, slow and control groups paused predominantly before noun phrases, averaging 38.2%, 48.7%, 42.5% respectively, as compared with native speakers (18.4%), suggesting that the L2 speakers had greater difficulty accessing the target noun within a verb phrase, noun phrase, or prepositional phrase.

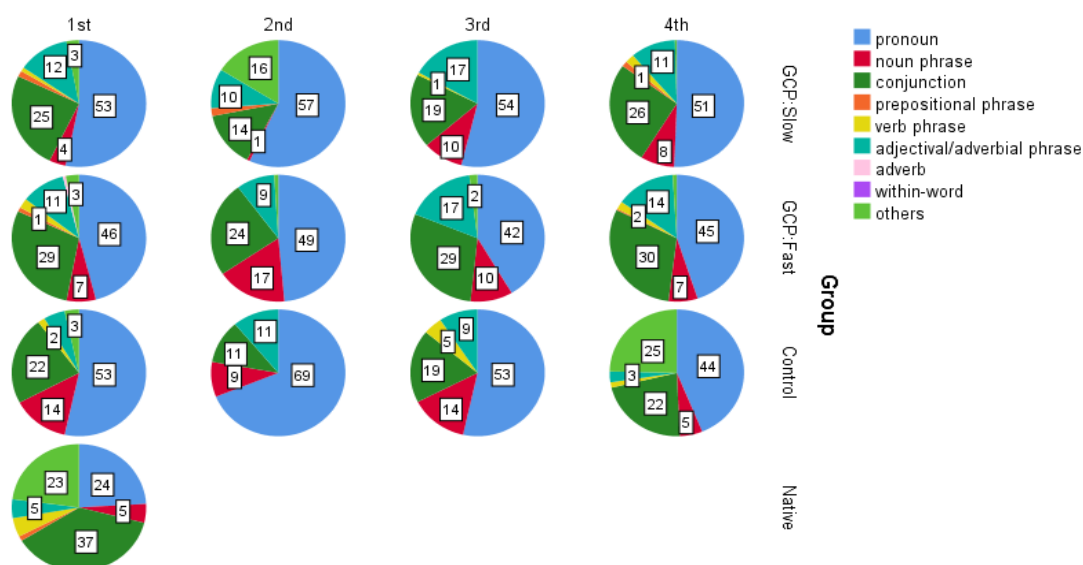


Figure 14: Parts-of-Speech of the Lexical Items Following the Clause Pauses for Slow, Fast, Control and Native Group

As shown in Figure 14, the fast, slow and control groups clearly paused before pronouns, especially the word “I”, averaging 45.5%, 53.8%, 54.8% respectively, while native speakers paused more often before conjunctions at 37%.

Discussion

The first research question examined whether utterance fluency improved over the academic year. The results clearly showed that the fast group progressed in their fluency in terms of speech rate, articulation rate, length of runs, pause ratio, and repeated words. The slow group also made modest gains with improved speech rate, but only slight gains in the articulation rate. Despite increasing their reliance on filled pauses, this group managed to increase their length of runs, reduce pause ratio, and repeated words. The control group, on the other hand, showed little improvement overall. However, although encouraging, compared to the native group, there is still much needed to match native fluency.

The second research question examined whether the learners produced fewer pauses and used more repairs as they progressed in speaking. Our initial findings would suggest that less proficient speakers of English are less efficient in encoding syntactic, lexical, and phonological structures (Mora & Levkina, 2017). These learners generally paused more repeatedly and had longer periods of silence (de Jong, 2016). However, by applying this triad of fluency measures, we can also appreciate that particular aspects of performance were more relevant to differentiate particular levels of proficiency than others (e.g., Iwashita et al., 2008; Nakatsuhara, 2014). The control group, for example, seemed less phased to speak at a low articulation rate as a compensatory strategy to maintain fluency. However, as the learners became more proficient, there was a noticeable reduction in pausing. The more proficient slow and fast groups certainly reduced the pause ratio while improving their speed in their spoken English. Effective preparation, repetition and testing of tasks in TPP encouraged students to become more adept to conceptualizing and formulating their messages. Furthermore, as students developed confidence to stretch their language in the practice rounds of TPP, real improvement occurred in students expressing themselves with lengthier and more complex sentences which can only indicate greater proficiency in their English abilities.

Drawing our attention to the second part of the second question, it becomes less apparent whether more proficient groups relied more on repair in their spoken utterances. Looking at repeated phrases, as the student became more proficient, students relied less on this strategy (Tavakoli *et al.*, 2020). However, when focusing on filled pauses, there would seem to be a clear indication that both the slow and control groups used this strategy increasingly more due to limitations in their spoken English. In contrast, the fast group, although they initially used filled pause the most during the first half of the academic year, relied actually less on this strategy in the latter half due to a greater improvement in the proficiency in their English to maintain their utterances. As students' second language ability developed during the year when engaging in their English-speaking activities, they had to constantly draw on their lexical resource at the formulation stage to complete the recorded data. It would appear that the fast group demonstrated greater improvement in the cognitive demands in retrieving lexical/grammatical items while the other group relied more on serial encoding to express their ideas succinctly. However, this varying range of repairs used by each group would suggest individual preference in their cognitive efforts to process grammatical speech plan is unpredictable and affected by their motivation in the tasks.

The third research question examined how the frequency and length of between-clause and within-clause changed in the higher-leveled and lower-leveled speakers. It was shown that the less proficient speakers paused more frequently in the middle of the clauses while the more proficient groups showed some reduction in the number of NCB pausing. Due to their improved fluency in formulating their sentences, the slow and fast decreased their use of BCB pauses too. However, it is also important to note that NCB pausing was less than BCB (except the first quarter for the slow group) which would suggest a more natural level of chunking, better parallel processing and greater success in managing speech production. Again, due to effective preparation, repetition and testing of tasks in TPP, students developed better control in their capabilities to conceptualize and formulate their messages more simultaneously at the clause level (Kormos, 2006; Skehan, 2014). Furthermore, as students developed confidence to stretch their language in the practice rounds of TPP, real improvement occurred in students expressing themselves with lengthier and more complex sentences which can only indicate greater proficiency in their English abilities.

The fourth question asked whether there were significant differences in the syntactic locations of between-clause and within-clause pauses among the more/less proficient speakers and native speakers. It would appear that all groups seemed to predominantly pause at the clause boundary, followed by pausing within prepositional phrases and finally within-phrase boundaries despite the contrasting rate of pausing rate by each group (control 64%, slow 41%, fast 34% and native 14%). Only the control group paused less than half of the total number of pauses which indicated their hesitancy compared to the other groups. Overall, this would imply that there is some consistent cognitive delay in natural development of sentence planning by each group. However, unlike native speakers, all non-native groups paused at prepositional phrases or within-phrase boundaries. Pausing in these two categories indicate the challenges for non-natives to phonological encoding collocative phases to provide chunking aspects to their speech production, a quality automatic for a native speaker.

The final research question examined whether there were significant differences in the proportion of parts-of-speech of the lexical items following between-clause and within-clause pauses among the more/less proficient speakers and native speakers. The results showed that there was no clear pattern among the non-native groups but a marked difference between native and non-native. Looking closer at parts of speech used at NCB (Figure 13), overall, the fast, slow and control groups paused predominantly when deciding noun phrases but varied in level of complexity due to proficiency. Native speakers, on the other hand, paused more on adverbial phrases in order to conceptualize their message. Focusing on BCB pausing (Figure 14), the non-native groups clearly paused before predominantly on pronouns, especially about conveying information about themselves (i.e. “I”, “my”) due to a limitation in grammatical encoding, and thus preferring simpler sentence constructs. Native speakers paused more often before conjunctions, such as “so” and “and” as there was a willingness to produce longer runs with hesitancy in conceptualizing their message. As a result, despite the improvement in proficiency for the slow and fast groups with a clear shift in change at NCB and BCB and a pausing sequence to match natives at the sentence level, there would still seem to be a certain time lag in the formulation stage of particular lexical items.

Conclusion

On the whole, by applying a combination of speed, breakdown, repair and composite measures, the wider aspect of the meaning of fluency could be observed and the characteristics of fluency could be better understood at different levels of proficiency

(Nakatsuhara, 2014; Tavakoli et al., 2017). One can appreciate that fluency does not simply concentrate on how fast a speaker can produce their utterances but also on whether the utterances are made with relative ease and less hesitancy (Tavakoli et al., 2020). This paper recognized that the rate of progression in English fluency was reflected not only by the speed of the delivery but by their level of pausing and, to some extent, repair.

The changes in pause length, frequency and location over the academic year as well as level of repair also provided invaluable insight into the cognitive processes that underlie a lower-level student's development in speaking a second language. For students to better reflect fluent speakers speaking production, they needed to become more efficient and automatic (Kormos, 2006) in how they draw on lexical, grammatical, morphophonological and phonetic encoding. Unlike the control group, the slow and fast groups benefited from the repetition of tasks in TPP by creating opportunities to extend their range of lexical and grammatical knowledge (Kormos, 2006) and enabling them to subconsciously *parallel process* aspects of their spoken language (Kormos, 2006, Lambert et al., 2020, Skehan 2014) which would be reflected in better chunking. There was also greater fluency in their speak production, reduction in repair (Tavakoli et al., 2020) and altered pause location between clauses to reflect improved speech processing and production due to clearer monitoring of how the output is formulated (Skehan et al., 2016).

Finally, most of the findings of the present study have supported the hypothesis that improved fluency of the slow and fast groups can be attributed to the successful application of the TPP framework. Both the slow and fast groups built up their sociolinguistic/pragmatic competence by being encouraged to speak up individually, to contribute to their communicative strengths, to experiment with their understanding of their English abilities and to encourage better comprehensibility to the listener in tasks. In turn, this led to less processing time on the formulation, articulation, and self-monitoring stages of these aspects of the spoken language in an effort to maintain their utterances. With widely acknowledged research that students in Japan find it challenging to converse in their English (Maeda, 2010), this paper would recommend that the TPP framework become an additional asset in the EFL classroom to re-orientate students to conversational English and improve their fluency.

Acknowledgement

The present research was supported by a research grant from Tokyo Keizai University in the academic year of 2020 (No.20-17) to the second author.

Appendices

Appendix 1: Composite Measures

1. Speed

Formulae for Speech Rate, Articulation Rate and Mean Length of Run

Speech Rate (SR) (syllables/min)	$\frac{\text{Total number of syllables produced from entire narrative}}{\text{The total time (in minutes) required to produce the speech sample}}$
Articulation Rate (AR) (syllables/min)	$\frac{\text{Total number of syllables produced from entire narrative}}{\text{The total time of speech sample excluding pause time of 300ms or above}}$
Length of Runs (MLoR) (syllables/utterance)	Average mean of all syllables between pauses of 250ms or above

2. Pausing

Pause-time Ratio

Pause Ratio (PauseRat) (%)	$\frac{\text{Length of total pauses}}{\text{Time taken to produce the narrative}} \times 100$
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3. Repair

Filled Pauses, False Starts and Repeats

Filled Pauses Frequency (per 100 syllables)	False Starts Frequency (per 100 syllables)	Repeats Frequency (per 100 syllables)
$\frac{\text{Total number of filled pauses}}{100 \text{ syllable utterance}}$	$\frac{\text{Total number of false starts}}{100 \text{ syllable utterance}}$	$\frac{\text{Total number of repeats}}{100 \text{ syllable utterance}}$

Appendix 2

Non-clausal and between Boundaries Formulae

	Non-Clausal Boundaries (NCN)	Between-Clausal Boundaries (BCB)
Mean length (secs)	$\frac{\text{Total length of non-clausal pause}}{\text{The frequency of non-clausal pauses}}$	$\frac{\text{Total length of clausal pause}}{\text{The frequency of clausal pauses}}$
Frequency (per 100 syllables)	$\frac{\text{Total number of non-clausal pause}}{100 \text{ syllable utterance}}$	$\frac{\text{Total number of clausal pause}}{100 \text{ syllable utterance}}$

Appendix 3

Example Summary of Each Group’s Performance and Comparison with Native Group

Although it can be seen that progress was made by the slow and fast groups, there still hangs the question regarding fluency at native level. Below is a summary of a typical performance by one member of each group by the third quarter of the academic year.

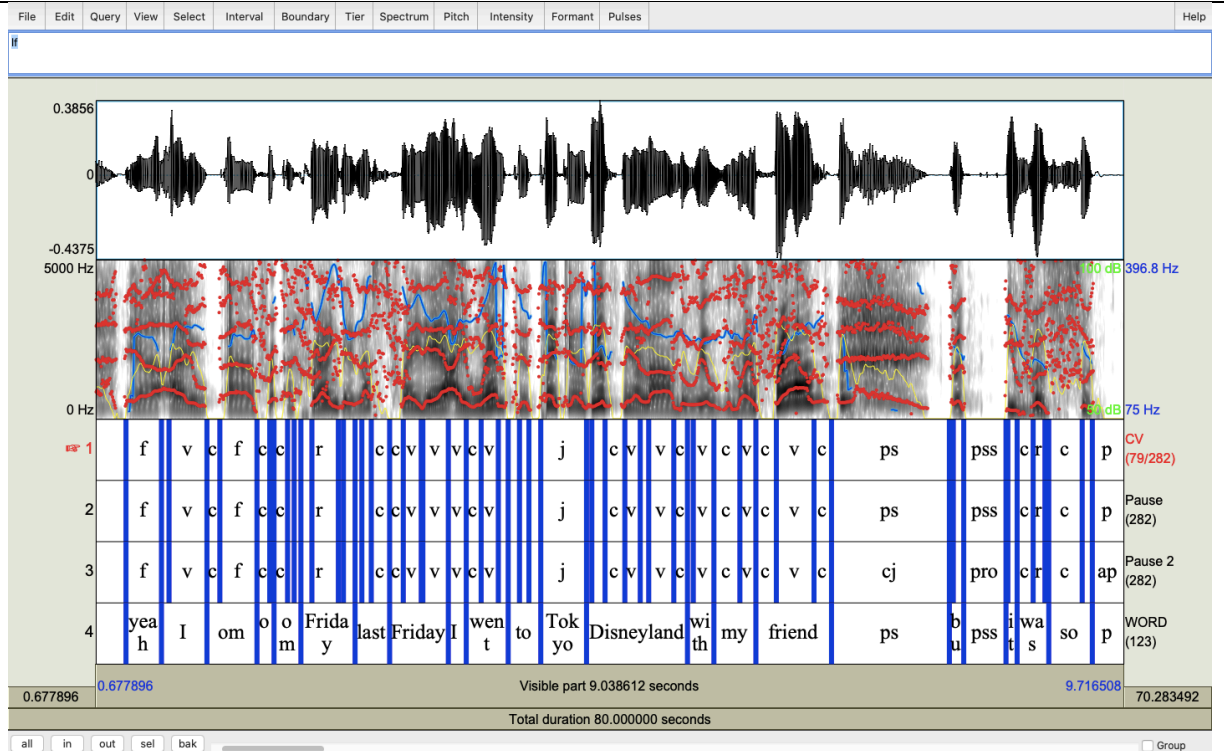
Reflection on Fluency of control, slow, fast and native groups

Control Group – Recording 9 (Third Quarter) 9 second excerpt

Slow rate of lexis with lengthened sounds/ Frequent pauses between clause (conjunction and pronoun) and within clauses (subject - verb and clause boundary) / Short length of runs / Repeat of pronoun “I”

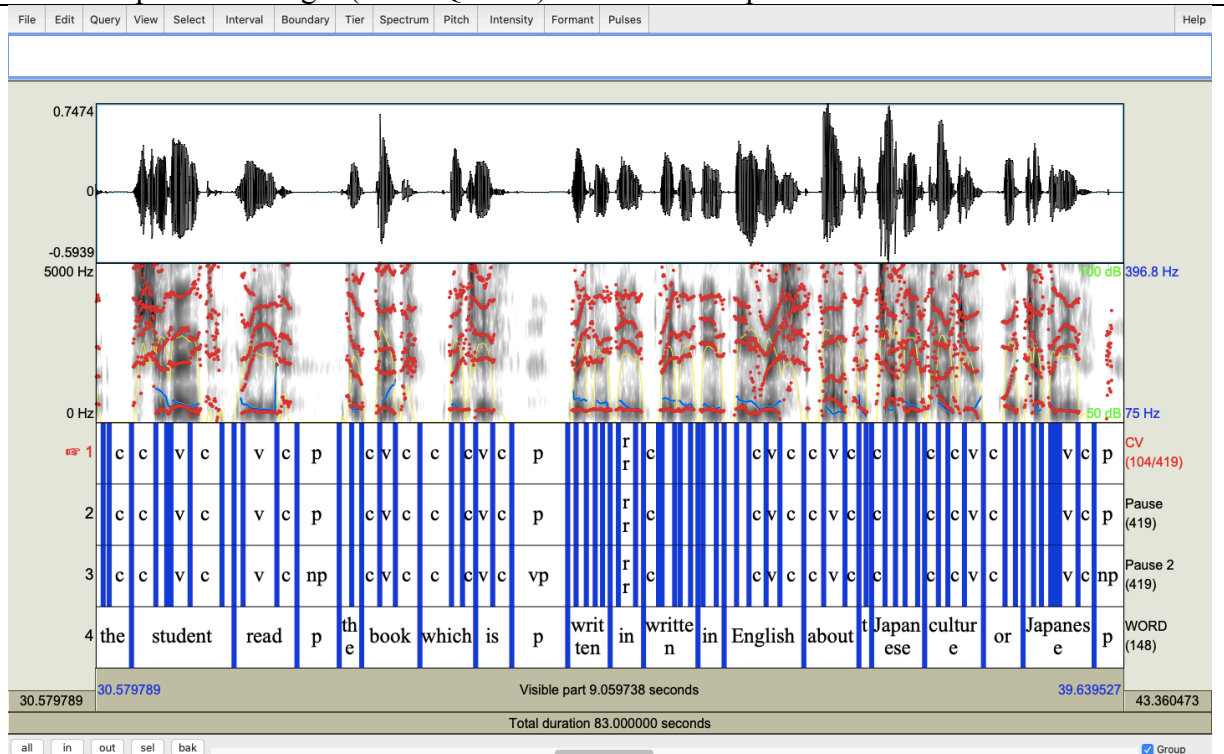
Conclusion: Dysfluency with low SR, moderate LR, no filled pause but repeat

Slow Group – Recording 9 (Third Quarter) 9 second excerpt



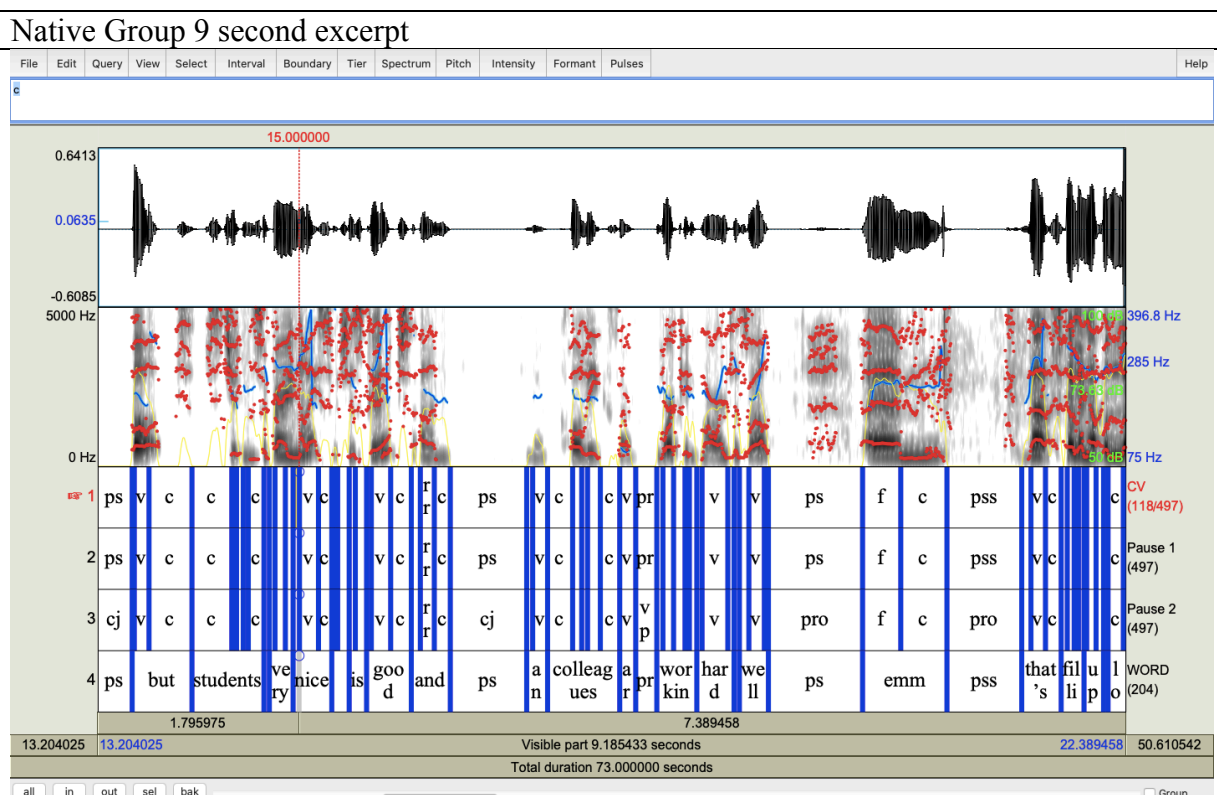
Compared to the control group, slightly longer runs and lexis was spoken at a faster rate with shortened sounds but infrequent pausing between clause (before the conjunction “but” and the pronoun “it”). No pausing within clauses but effort to express ideas as repeated (“I” and “Friday”) to fine-tune the message of time and the fillers (“yeah” and “om”)

Fast Group – Recording 9 (Third Quarter) 9 second excerpt



Compared to the slow group, slightly longer runs with more complicated use of a dependent clause. Lexis spoken is at a similar rate to the slow group but this is maintained throughout

the recording. With longer runs, there are infrequent pausing between clause (not in above example) but pausing within clauses to express ideas using more challenging grammatical structures: before a noun (“the book”) and verb phrases (“written in”) as well as the repair: repeated (“written in”) to fine-tune the message of the kind of book read



Instantly, one can see that there is a faster rate of production of language and more complex grammar with longer runs of speech. There is only pausing between clauses (before the conjunction “and” and pronoun “that’s”) as the speaker takes time to consider content for the message. There is one use of the filler “emm” to consider the message while maintaining fluency.

It can, therefore, be concluded that while progress was made by the slower and faster groups, to reach the level of fluency of native speakers requires still greater development in the formulation, articulation and self-monitoring stages. Native speakers focus purely on conceptualization of speech through planning the upcoming utterance. This is indicated by the much faster rate of speech production, slight pausing between clauses, and the seldom application of filler repairs in the monologues. The non-native groups clearly relied, although at varying degrees depending on proficiency, on the other stages in their speech production.

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Contact email: jasonpipe@gmail.com

Teaching Burmese as a Foreign Language: A Case Study

Lwin Ni Ni Khine, Yangon University of Foreign Language, Myanmar

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Abstract

The development of Myanmar as a country has led to an increased interest from foreign NGOs, businesses, labors and professionals alike. One significant barrier that has arisen is their ability to learn the Myanmar language. The Myanmar language is comprised of a speaking format and a writing format. The current study explored the writing ability of overseas Myanmar language learners (n=30) in a Myanmar university from various countries including Australia, China, India, Japan, Korea and Thailand. 30 passages of written text were collected and typed in word document for archive. Textual analysis of the 30 essays revealed 23 types of grammatical mistakes, which were categorized into 3 main groups (1) syntax misuse, (2) word misplacement and (3) inappropriateness usage. The inappropriateness usage can be further classified into semantics inappropriateness and pragmatic inappropriateness. Take together, the mistakes highlight a potential learning need or development area, which may be emphasized at the beginning of the learning process. Teachers may benefit from having a greater awareness of the differences of the grammatical features between the learners' mother-tongue and the Myanmar language. Such awareness would ease the writing process and might diminish the written mistakes for learners in the future. The context of the writing should be discussed prior to the writing process and the cultural differences should be highlighted beforehand. Then, the appropriateness of word usage will be maintained.

Keywords: Burmese, Foreign Learners, Grammar, Word, Usage

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Introduction

Nowadays, according to the development of Myanmar, there are many foreigners studying Burmese around the world. Therefore, there are various level Burmese classes appear in different countries. In a Myanmar university, foreign learners need to be taught proper grammar in learning Burmese 4 skills. The proper grammar is essential in all levels, basic level, intermediate level and advanced level. Foreign learners start learning Burmese language and grammar in basic level and they can use the learned grammar till advanced level. In intermediate level, learners' learning skills and proficient are well enough to manage daily activities, like journal writing, dairy, and so forth. Knowing the writing ability of the intermediate level foreign learners would help to improve the advanced level teaching pedagogy and readjust the basic level teaching contents.

Statement of the Problem

There are many types of Burmese classes in different settings. The levels can be divided into certificate, diploma, undergraduate and postgraduate. Alternatives are basic level, intermediate level and advanced level for vocational training. However, the classes around the world have their own curriculum and teaching materials. Because of the differences between different institutions in different regions, an understanding of the ultimate components in the curricula would be essential. To identify the crucial items in the curricula, understanding of the needs of the foreign learners in practice should be highlighted.

Significance of the Study

Significance of this study is providing an overview of the essential items when teaching Burmese as a foreign language. Indeed, the most essential item is grammar in learning four skills of Burmese. Once the grammar errors and the significant of barriers for the foreigners to learn Burmese are identified, the adjustment of the curricula will be more effective. And, I expect that a better or a tailor-made curriculum can be developed accordingly.

Research Questions

The research questions of this study are:

- 1) What are the common grammatical errors of Burmese as foreign language in the learning process?
- 2) Why foreigners have these errors?
- 3) What does we need to fill for these errors to be less and easier in teaching and learning Burmese?

Literature Review

There are many studies about learning foreign languages as second language.

Kenzie Shofner (2020) explored the differences between speaking format and writing format in learning Burmese are main barriers for foreign learners. Win Hein (2013) found that the pronunciation, spelling or Burmese sentence structures are difficulties from the learners' perspectives. May Nyane and Maryland (2015) indicated that the usage of Burmese is the biggest challenge for foreigners according to the learners' tasks.

According to Lan Luu (2019) had identified the grammatical mistakes found from foreigners in the grammatical learning process of Japanese language. Due to the Japanese grammar is similar to Burmese grammar, the grammatical learning would also become a potential challenge for the Burmese learners.

There are rare study exploring the intermediate level foreign learners' writing 'Burmese as a second language' ability. Such gap is identified. Thus, this study is mainly exploring the writings from foreigners in an intermediate class in a Myanmar tertiary education.

Methodology

When I found methodology to use in this study, I choose case study approach because it is suitable for collecting grammatical data from the writing of foreign learners in one specific level as a case. For this study, I located an intermediate level class of a foreign language institution in Myanmar. I choose intermediate level foreign learners because their Burmese 4 skills are not starters as basic level foreigners and their proficiency is not skillful as advanced level foreigners.

For data collection, I collected 30 essays with the title of 'Introduction of a place', written by 30 foreign learners from 6 nations (Australia, China, India, Japan, Korea and Thailand). 30 foreign learners included 4 Indians, 1 Australian, 5 Japanese, 1 Thai, 2 Koreans and 17 Chinese.

For data management, I numbered 30 foreign learners as learner 1, learner 2. Then, I managed the sentences of each essay according to correct and incorrect usages and sentence structures. I identified the incorrect sentences and highlighted the grammatical errors.

Data Analysis

First, I summarized the correct and incorrect sentences in number and percentage according to learners' serial numbers and nationalities (see Table 1). The 30 learners wrote 407 sentences. Correct sentences are 202 (49.63%) and incorrect sentences are 205 (50.36%).

Learners' serial number	Nationality	No. of Nationality	no. of Sentences (100%)	Correct (%)	Incorrect (%)
Learner 1	Indian	1	11	3 (27.27%)	8 (72.72%)
Learner 2	Chinese	1	15	9 (60%)	6 (40%)
Learner 3	Japanese	1	18	7 (38.88%)	11 (61.11%)
Learner 4	Thai	1	17	10 (58.82%)	7 (41.17%)
Learner 5	Japanese	2	11	6 (54.54%)	5 (45.45%)
Learner 6	Chinese	2	14	10 (71.42%)	4 (28.57%)
Learner 7	Japanese	3	7	2 (28.57%)	5 (71.42%)
Learner 8	Chinese	3	16	7	9

				(43.75%)	(56.25%)
Learner 9	Korean	1	12	6 (50%)	6 (50%)
Learner 10	Indian	2	15	5 (33.33%)	10 (66.66%)
Learner 11	Chinese	4	15	9 (60%)	6 (40%)
Learner 12	Chinese	5	12	8 (66.66%)	4 (33.33%)
Learner 13	Chinese	6	9	1 (11.11%)	8 (88.88%)
Learner 14	Chinese	7	11	3 (27.27%)	8 (72.72%)
Learner 15	Chinese	4	12	6 (50%)	6 (50%)
Learner 16	Japanese	5	16	10 (62.5%)	6 (37.5%)
Learner 17	Chinese	8	10	6 (60%)	4 (40%)
Learner 18	Australian	1	12	3 (25%)	9 (75%)
Learner 19	Korean	2	15	7 (46.66%)	8 (53.33%)
Learner 20	Chinese	9	13	3 (23.07%)	10 (76.92%)
Learner 21	Chinese	10	13	3 (23.07%)	10 (76.92%)
Learner 22	Chinese	11	15	11 (73.33%)	4 (26.66%)
Learner 23	Chinese	12	13	10 (76.92%)	3 (23.07%)
Learner 24	Chinese	13	17	12 (70.58%)	5 (29.41%)
Learner 25	Chinese	14	14	8 (57.14%)	6 (42.85%)
Learner 26	Chinese	15	11	6 (54.54%)	5 (45.45%)
Learner 27	Indian	3	15	11 (73.33%)	4 (26.66%)
Learner 28	Chinese	16	15	5 (33.33%)	10 (66.66%)
Learner 29	Chinese	17	16	10 (62.5%)	6 (37.5%)
Learner 30	Indian	4	17	5 (29.41%)	12 (70.58%)
Total			407 (100%)	202 (49.63%)	205 (50.36%)

Table 1: Correct and Incorrect Sentences of Each learner

Correct and incorrect sentences according to nationality can be seen in Figure 1.

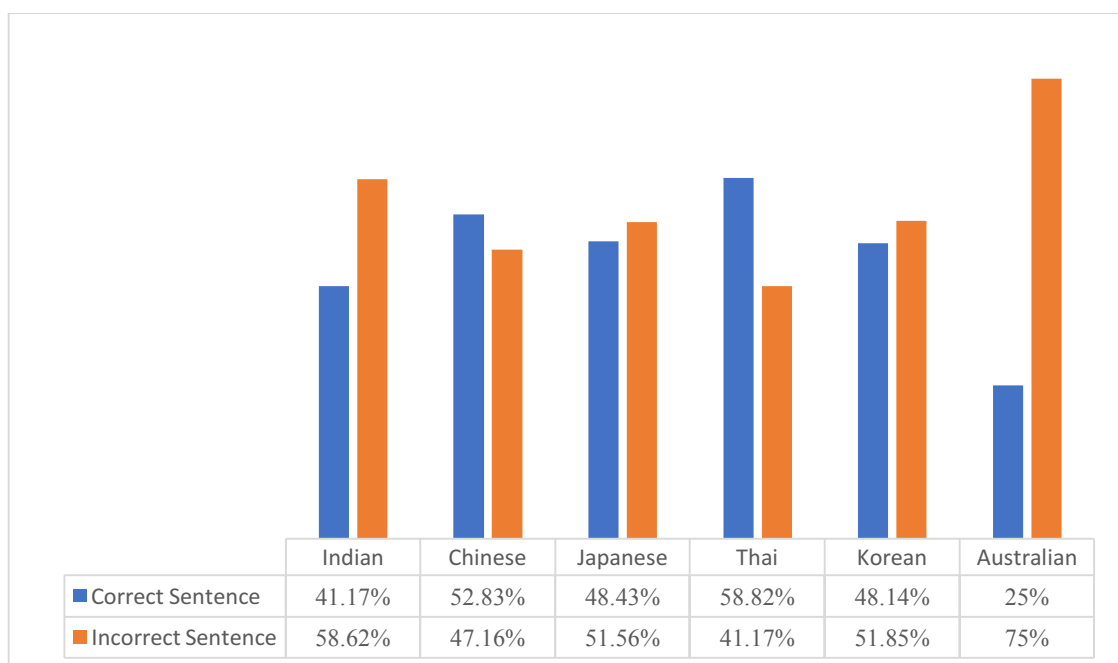


Figure 1: Correct and Incorrect Sentences According to Nationality

I analyzed the sentences into 4 parts as follows:

correct sentence = no mistake = ok

incorrect sentence = grammatical mistake= X

rearrangement of sentence order = need to change= Y

spelling error = green words

Figure 2 show that the percentages of these 4 parts.

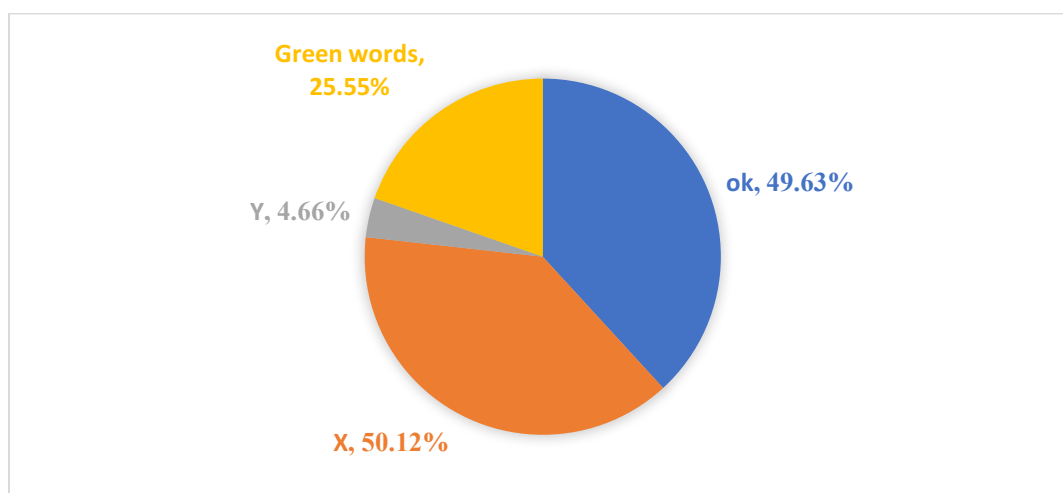


Figure 2: Percentages of 4 Parts

There are 23 types of grammatical errors are identified. (see Figure 3).

- 1) Particle for intended place/person (1X)
(ရှေးရှုရာပြဝိဘတ်)
- 2) Particle for place (2X)
(နေရာပြဝိဘတ်)
- 3) Usage of verb (3X)
(ကြိယာအသုံးပြုပုံ)
- 4) Speaking and writing (4X)
(အပြောအရေး)
- 5) Extra and need (5X)
(အပိုအလို)
- 6) Particle for possession (6X)
(ပိုင်ဆိုင်ခြင်းပြဝိဘတ်)
- 7) Adjective for indicating (7X)
(အညွှန်းပြနာမဝိသေသန)
- 8) Particle for object (8X)
(ကံဝိဘတ်)
- 9) Conjunction for one after one (9X)
(တစ်ခုပြီးတစ်ခုပြသမှုနွဲ့)
- 10) Conjunction for reason (10X)
(အကြောင်းပြသမှုနွဲ့)
- 11) Levels of adjective/ adverb (11X)
(နာမဝိသေသန/ကြိယာဝိသေသနအဆင့်)
- 12) Particle for separating (12X)
(ခွဲထုတ်ရာပြဝိဘတ်)
- 13) Particle for changing to adjective (13X)
(နာမဝိသေသနပုဒ်ပြောင်းပစ္စည်း)
- 14) Pronoun for indicating (14X)
(အညွှန်းနာမ်စား)
- 15) Mathematical adjective (15X)
for amount and number
(ပမာဏပြ/အရေအတွက်ပြသချာနာမဝိသေသန)
- 16) Conjunction for opposition (16X)
(ဆန့်ကျင်ပြသမှုနွဲ့)
- 17) Particle for argument (17X)
(အငြင်းပြပစ္စည်း)
- 18) Particle for subject (18X)
(ကတ္တားဝိဘတ်)
- 19) Particle for variety (19X)
(မျိုးပြပစ္စည်း)
- 20) Particle for supporting noun (20X)
(နာမ်ထောက်ပစ္စည်း)
- 21) Conjunction for combining (21X)
(ပေါင်းစည်းပြသမှုနွဲ့)

- 22) Particle for verb of time (ကာလပြုကြိယာဝိဘတ်) (22X)
- 23) Noun-changing from verb (ကြိယာနာမ်) (23X)

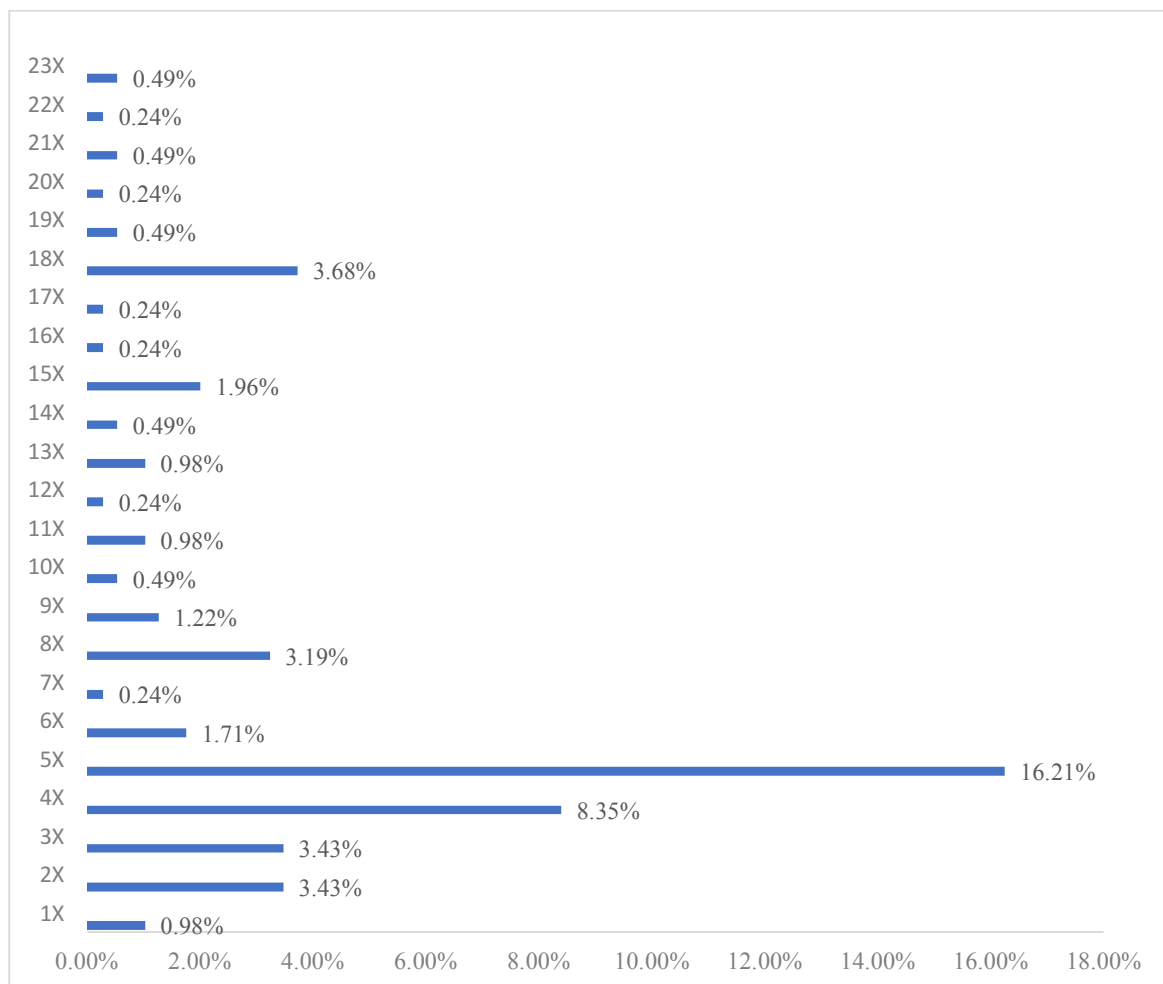


Figure 3: Percentages of 23 Types

As shown in Table 2, we can see the total of sentences and percentages of each nationality.

Types	4 Indians	17 Chinese	5 Japanese	1 Thai	2 Koreans	1 Australian
ok	24 (5.89%)	121 (29.72%)	31 (7.61%)	10 (2.45%)	13 (3.19%)	3 (0.73%)
1X	2 (0.49%)	2 (0.49%)	-	-	-	-
2X	3 (0.73%)	8 (1.96%)	2 (0.49%)	1 (0.24%)	-	-
3X	2 (0.49%)	8 (1.96%)	1 (0.24%)	1 (0.24%)	1 (0.24%)	1 (0.24%)
4X	15 (3.68%)	16 (3.93%)	-	-	2 (0.49%)	1 (0.24%)
5X	10 (2.45%)	38 (9.33%)	7 (1.71%)	4 (0.98%)	5 (1.22%)	2 (0.49%)

6X	-	7 (1.71%)	-	-	-	-
7X	-	1 (0.24%)	-	-	-	-
8X	1 (0.24%)	7 (1.71%)	1 (0.24%)	-	-	4 (0.98%)
9X	1 (0.24%)	1 (0.24%)	1 (0.24%)	1 (0.24%)	-	1 (0.24%)
10X	-	-	1 (0.24%)	1 (0.24%)	-	-
11X	-	3 (0.73%)	-	-	-	1 (0.24%)
12X	-	1 (0.24%)	-	-	-	-
13X	-	1 (0.24%)	3 (0.73%)	-	-	-
14X	-	-	2 (0.49%)	-	-	-
15X	2 (0.49%)	4 (0.98%)	1 (0.24%)	-	1 (0.24%)	-
16X	-	-	-	-	-	1 (0.24%)
17X	1 (0.24%)	-	-	-	-	-
18X	1 (0.24%)	6 (1.47%)	3 (0.73%)	-	-	5 (1.22%)
19X	-	2 (0.49%)	-	-	-	-
20X	-	-	1 (0.24%)	-	-	-
21X	-	1 (0.24%)	-	-	1 (0.24%)	-
22X	-	1 (0.24%)	-	-	-	-
23X	-	2 (0.49%)	-	-	-	-
Y	3 (0.73%)	11 (2.70%)	2 (0.49%)	1 (0.24%)	1 (0.24%)	-
Green words	5 (1.22%)	54 (13.26%)	22 (5.40%)	4 (0.98%)	6 (1.47%)	5 (1.22%)

Table 2: 23 Types of grammatical errors according to nationality

Findings

The 23 types of grammatical errors are classified into 3 categories.

- 1) Syntax Misused
- 2) Word Misplacement
- 3) Usage Inappropriateness

1) Syntax Misused

"Syntax misused" is the usage of grammatical words are misplaced, misused or missed. Among the incorrect sentences, foreign learners usually mixed up with some grammatical words in speaking format of Burmese. It could be due to the differences between speaking format and writing format.

a) Particle for subject (ကတ္တားဝိဘတ်)

In Burmese grammar, Particles for subject (ကတ္တားဝိဘတ်) are "သည်၊ က".

Example a (Learner 16)

ဘာဖြစ်လို့လဲဆိုရင် Okinawa ခရိုင်က ကမ်းခြေမှာ အရမ်းလှတယ်။

In this example, learner 16 misplaced က and မှာ. Because they are similar in some speaking usages in Burmese. က is grammatical word for subject and မှာ is for places. Okinawa ခရိုင် is the subject. ကမ်းခြေ is the place. Therefore, the correct sentence should be: ဘာဖြစ်လို့လဲဆိုရင် ခရိုင်မှာ ကမ်းခြေက အရမ်းလှတယ်။

b) Particle for Object (ကံဝိဘတ်)

In Burmese grammar, Particle for object (ကံဝိဘတ်) is "ကို".

Example b (Learner 20)

ခရီးသည်တွေဟာ Cang Shan တောင်ပေါ်မှာ သွားရင် ကြိုးဆွဲယာဉ်နဲ့ စီးနိုင်တယ်။

Learner 20 misused နဲ့ and ကို. နဲ့ is Particle for using as *by car = ကားနဲ့* in English. She mixed up the usage of နဲ့ and the object particle usage ကို. It is because of verb စီးတယ်။ In Burmese, we use like this *ကားကိုစီးတယ်။* and *ကားနဲ့သွားတယ်။* In this sentence, ကြိုးဆွဲယာဉ် is the object. It is not the used transport. Therefore, the correct sentence should be ခရီးသည်တွေဟာ Cang Shan တောင်ပေါ်မှာ သွားရင် ကြိုးဆွဲယာဉ်ကို စီးနိုင်တယ်။

c) Particle for Intending Place/Person (ရှေးရှုရာပြဝိဘတ်)

In Burmese grammar, Particle for intended place/person (ရှေးရှုရာပြဝိဘတ်) is "သို့ (speaking form-ကို)".

Example c (Learner 1)

ရိုနာဂမြို့ဟာ ကား၊ ဘတ်စ်ကား၊ လေယာဉ်ပျံတို့နဲ့ သွားနိုင်ပါတယ်။

Learner 1 misused ဟာ and ကို. ဟာ is speaking word of Particle for subject. ကို is speaking word of Particle for intending place/person. ရိုနာဂမြို့ is the place. It is not the subject.

Therefore, the correct sentence should be ရှိနာဂမြို့ကို ကား၊ ဘတ်စ်ကား၊ လေယာဉ်ပျံတို့နှင့် သွားနိုင်ပါတယ်။

d) Particle for Place (နေရာပြဝိဘတ်)

In Burmese grammar, Particles for place (နေရာပြဝိဘတ်) are "ဤ၊ မှာ၊ တွင်၊ ဝယ်၊ က)".

Example d (Learner 4)

ကောင်းမွန်စွာတဲ့ ကျန်းမာရေးအတွက် ရေပူစမ်းကို စိမ်နိုင်ပါတယ်။

Learner 4 misused ကို and မှာ. ရေပူစမ်း is the place. It is not the object. Therefore, the correct sentence should be ကောင်းမွန်စွာတဲ့ ကျန်းမာရေးအတွက် ရေပူစမ်းမှာ စိမ်နိုင်ပါတယ်။

For the above examples, the foreign learners misplaced, misused and missed some of the grammatical words for subject, object, places and so forth. The other potential reason for these mistakes would be the variations between Burmese and their own mother-tongue language.

2) Word Misplacement

The second category is word misplacement. Word misplacement is the placement of the words are misplaced or missing. It would be due to their misunderstanding or lack of knowledge about buffer language, their mother-tongue language and Burmese.

a) Levels of Adjective/Adverb (နာမဝိသေသန/ကြိယာဝိသေသနအဆင့်)

In Burmese grammar, levels of adjective/adverb (နာမဝိသေသန/ကြိယာဝိသေသနအဆင့်) are such as "ကောင်းသောနေရာ၊ ပိုကောင်းသောနေရာ၊ အကောင်းဆုံးနေရာ".

It looks like comparative and superlative in English such as "good place, better place, best place".

Example a (Learner 18)

ငါးနဲ့အလူးချောင်းကြော အကောင်းဆုံး စားနိုင်ပါတယ်။

Learner 18 misplaced the words, ငါးနဲ့အလူးချောင်းကြော and အကောင်းဆုံး. ငါးနဲ့အလူးချောင်းကြော is noun. အကောင်းဆုံး is the highest level of adjective. In Burmese syntax, level of adjective is in front of noun. Therefore, the correct sentence should be အကောင်းဆုံး ငါးနဲ့ အလူးချောင်းကြော စားနိုင်ပါတယ်။

I found that the misplacing of levels of adjective/adverb and noun/verb in the above incorrect sentences. Because of these examples, the intermediate foreign learners are mixed up with the placement of words in Burmese sentences.

b) Mathematical Adjective for Amount and Number (ပမာဏပြု/အရေအတွက်ပြသချာနာမဝီသေသန)

In Burmese grammar, Mathematical adjective for amount and number are such as "ကျောင်းသားအချို့". Because noun is always in front of the number or the amount in Burmese sentence structure. It is different from other foreign language sentence structure, especially in English (for example- some students).

Example b (Learner 19)

အနက်ရောင်ကျောက်တောင်မှာ သေးသေးလေးတွေ လိုက် များကြီး ရှိတယ်။

Learner 19 misplaced the words, သေးသေးလေးတွေ and လိုက်. သေးသေးလေးတွေ is the mathematical adjective for amount. လိုက် is noun. Therefore, the correct sentence should be အနက်ရောင်ကျောက်တောင်မှာ လိုက် သေးသေးလေးတွေ များကြီး ရှိတယ်။

c) Particle for Supporting Noun (နာမ်ထောက်ပစ္စည်း)

In Burmese grammar, Particles for supporting noun are such as "သာ ပင် (ပဲ-for speaking form) ၊ ချည်း". They mean that "only" in English. Normally, they are behind noun in Burmese sentence but in English, only one (တစ်ယောက်ပဲ). Sometimes they are behind the Particle or other which is connected with noun, not behind the noun, for example, (ဒါက မြေအတွက်ပဲ။= This is only for Mya Mya.)

Example c (Learner 16)

ရှုခင်းလှပြီး Okinawa ခရိုင်ပဲမှာ ရှိတဲ့ တိရစ္ဆာန်လည်း များတယ်။

Learner 16 misplaced the word, ပဲ, behind ခရိုင်. Normally, it is correct. But ခရိုင် is not noun. It is place because of မှာ. Therefore, the correct sentence should be ရှုခင်းလှပြီး Okinawa ခရိုင်မှာပဲ ရှိတဲ့ တိရစ္ဆာန်လည်း များတယ်။

In the above examples, I found that there are many foreign students made these kinds of mistakes because of studying Burmese from the translation of their mother-tongue language.

3) Usage Inappropriateness

The third category is usage inappropriateness. This category can be further divided into two categories. Usage inappropriateness is using incorrect usage in sentence. It is classified into two parts.

- a) Semantic Inappropriateness
- b) Pragmatic Inappropriateness

a) Semantic Inappropriateness

Semantic inappropriateness is using incorrect usage in sentence that makes the meaning of sentence, incorrect or mislead. It is because of the different usages between Burmese and other languages.

i) Usage of Verb (ကြိယာအသုံးပြုပုံ)

In Burmese grammar, usage of verb is such as "ကြိယာ + ဝိဘတ် = စား + သည်/တယ်". There are 3 kinds of verb, (1) verb for continuous (example- စားသည်), (2) verb for possession/location (example- မမမှာ စာအုပ် ရှိတယ်။-possession, မမ၏အိမ်သည် သူခလမ်းတွင် ရှိသည်။-location) and (3) verb for being (example- မမသည် ကျောင်းသူ ဖြစ်သည်။). There is another kind of verb usage in Burmese is totally different from English or other foreign language. For example, ဖွင့်တယ် and ပွင့်တယ် in the sentences "သူက တံခါးကို ဖွင့်တယ်။" and "ကိုကိုက တံခါးပွင့်နေတာကို တွေ့တယ်။". In English, "He **opens** the doors." and "Ko Ko saw the **open** doors." are the same using "open". It is different in Burmese. It depends on the noun that do other and the noun that be done by other. In the first sentence, the verb "" is for the noun "" who do "open". In the second sentence, the verb "" is for the noun "" that is done or opened by other.

Example i (Learner 8)

နွေဦးရာသီမှာ အမျိုးမျိုး ပန်းမန် ဖွင့်တယ်။

Learner 8 use incorrect usage ဖွင့် instead of ပွင့်. ဖွင့် is for the noun that is done by other. ပွင့် is for the noun do other. In this sentence, ပန်းမန် is the noun that do other. Therefore, the correct sentence should be နွေဦးရာသီမှာ အမျိုးမျိုး ပန်းမန် ပွင့်တယ်။

ii) Particle for Verb of Time (ကာလပြကြိယာဝိဘတ်)

In Burmese grammar, Particle for verb of time is tense of sentence. There are 3 tenses of sentence, (1) Present tense (example- ဒီနေ့ ကျောင်းသွားတယ်။), (2) Past tense (example- မနေ့က ကျောင်းသွားတယ်။), and (3) Future tense (example- မနက်ဖြန် ကျောင်းသွားမယ်။). Present tense usage and past tense usage are only different in time usage, other are same. Future tense usage is "မယ်၊ လိမ့်မယ်".

Example ii (Learner 22)

ဒီနေ့ ကျွန်မက တရုတ်နိုင်ငံမှာရှိတဲ့ ခွန်မင်းမြို့အကြောင်းကို မိတ်ဆက်ပေးပါတယ်။

Learner 22 use incorrect usage တယ် instead of မယ်. တယ် is verb for present tense in this sentence because of ဒီနေ့. မယ် is verb for future tense. This sentence shows the future tense that is coming nearly. Therefore, the correct sentence should be ဒီနေ့ ကျွန်မက တရုတ်နိုင်ငံမှာရှိတဲ့ ခွန်မင်းမြို့အကြောင်းကို မိတ်ဆက်ပေးပါမယ်။

iii) Extra and Need (အပိုအလို)

Extra and need is more extra usage and need usage than normal usage should be or must be in the sentence of Burmese.

Example iii (Learner 24)

ကျင့်ပိုရဲ့အရွက်တွေကို ကျတယ်။

Learner 24 wrote the sentence with the extra usage "ကို". "ကျင့်ပိုရဲ့အရွက်တွေ" is the subject, not object. And then, "ကို" is Particle for object. Therefore, the correct sentence should be ကျင့်ပိုရဲ့အရွက်တွေ ကျတယ်။

For the above examples, the semantic inappropriateness of foreign learners can make the meanings of sentences incorrect or mislead. These mistakes showed that learners forget to care about the characteristics of Burmese sentence structures. The mother-tongue language of the learners would affect the learning of Burmese. This fact would be quite common in all kinds of language learning process.

b) Pragmatic Inappropriateness

In usage inappropriateness, pragmatic inappropriateness is using incorrect usage in sentence or syntax that cannot make the meaning of the context clearly. This kind of incorrect usage cannot make the meaning of sentence incorrect. But it might lead to incorrect sentence structure or usage.

i) Noun-changing from Verb (ကြိယာနာမ်)

In Burmese grammar, verb changes into Noun when some words are adding in front of or behind that verb. (example- အ + စား = အစား၊ စား + စရာ = စားစရာ). We called that kind of noun as "noun-changing from verb".

Example i (Learner 23)

ရေပက်ခြင်းရဲ့အဓိပ္ပာယ်ဟာ အချင်းချင်း ဆုတောင်းပေးပါတယ်။

Learner 23 use incorrect usage ဆုတောင်းပေးပါတယ် instead of ဆုတောင်းပေးခြင်း ဖြစ်ပါတယ်. This sentence is explanation of the meaning of "ရေပက်ခြင်း". In Burmese, explanation ends with "ခြင်း ဖြစ်ပါတယ်". Therefore, the correct sentence should be ရေပက်ခြင်းရဲ့အဓိပ္ပာယ်ဟာ အချင်းချင်း ဆုတောင်းပေးခြင်း ဖြစ်ပါတယ်။

ii) Pronoun for Indicating (အညွှန်းနာမ်စား)

In Burmese grammar, pronouns for indicating are "ဤ၊ ထို၊ ယင်း၊ ၎င်း" (in speaking "ဒီ၊ အဲ့ဒီ၊ ဒါ၊ အဲ့ဒါ၊ ဟို"). They are used instead of noun.

Example ii (Learner 7)

အဲဒီတွေက အရင်ကတည်းက ဂျပန်လူမျိုးတွေလည်း ချစ်တဲ့အကြောင်းအရာ ဖြစ်ပါတယ်။

Learner 7 use incorrect usage အဲဒီ instead of အဲဒါ. အဲဒီ is for the place. အဲဒါ is for the thing. အကြောင်းအရာ is the thing. Therefore, the correct sentence should be အဲဒါတွေက အရင်ကတည်းက ဂျပန်လူမျိုးတွေလည်း ချစ်တဲ့အကြောင်းအရာ ဖြစ်ပါတယ်။

iii) Adjective for Indicating (အညွှန်းပြရာမဝိသေသန)

In Burmese grammar, adjectives for indicating are "ဤ၊ ထို၊ ယင်း၊ ၎င်း" (in speaking "ဒီ၊ အဲဒီ၊ ဒါ၊ အဲဒါ၊ ဟို"). They are behind noun.

Example iii (Learner 11)

Nanjing လမ်းဟာ ရှန်ဟဲမြို့ရဲ့အစည်ကားဆုံး ကုန်သွယ်ရေးလမ်း ဖြစ်တယ်။ ဟိုလမ်းအဆုံးမှာ Waitan ရှိတယ်။

Learner 11 use incorrect usage ဟို instead of အဲဒီ. ဟို is for the things we do not know definitely. (for example- ဟိုလမ်းကို သိလား။ = Do you know that road?). အဲဒီ is for the things we know definitely. (for example- ပြည်လမ်းကို သိလား။ အဲဒီလမ်းက ရှည်တယ်။ = Do you Pyi Road? That road is long.) In English, they are the same. Therefore, the correct sentence should be Nanjing လမ်းဟာ ရှန်ဟဲမြို့ရဲ့အစည်ကားဆုံး ကုန်သွယ်ရေးလမ်း ဖြစ်တယ်။ အဲဒီလမ်းအဆုံးမှာ Waitan ရှိတယ်။

iv) Particle for Possession (ပိုင်ဆိုင်ခြင်းပြဝိဘတ်)

In Burmese grammar, Particle for possession is "၏" (in speaking "ရဲ့"). They are behind noun.

Example iv (Learner 2)

အဲဒီနေရာဟာ ရွှေလီမြို့က ထင်ရှားကျော်စောတဲ့နေရာ ဖြစ်ပါတယ်။

Learner 2 use incorrect usage က instead of ရဲ့. က is for subject and ရဲ့ is for possession. Therefore, the correct sentence should be အဲဒီနေရာဟာ ရွှေလီမြို့ရဲ့ ထင်ရှားကျော်စောတဲ့နေရာ ဖြစ်ပါတယ်။

v) Particle for Separating (ခွဲထုတ်ရာပြဝိဘတ်)

In Burmese grammar, Particle for separating is "တွင်၊ အနက်၊ အထဲမှာ၊ အထဲမှာ" (in speaking "အထဲက၊ ထဲက"). They are behind noun.

Example v (Learner 2)

ချူကျင့်မြို့ဟာ တရုတ်နိုင်ငံက အသင့်တော်ဆုံးနေထိုင်တဲ့ မြို့ ၁၀ မြို့မှာ တစ်မြို့ ဖြစ်ပါတယ်။

Learner 2 use incorrect usage မှာ instead of ထဲက. မှာ is Particle for place and ထဲက is Particle for separating. Therefore, the correct sentence should be ချူကျင့်မြို့ဟာ တရုတ်နိုင်ငံက အသင့်တော်ဆုံးနေထိုင်တဲ့ မြို့ ၁၀ မြို့ထဲက တစ်မြို့ ဖြစ်ပါတယ်။

But it cannot make the meaning of sentence incorrect largely. We can understand the meaning of sentence clearly even with this kind of incorrect usage. It is only grammatically mistake.

vi) Classifiers (မျိုးပြဝစွည်း)

In Burmese grammar, particle for variety is "ပင်၊ ယောက်၊ ခု . . .". This kind of usage is depending on the kinds of things. (for example- သစ်ပင်တစ်ပင်)

Example vi (Learner 14)

နန်းကျင့်မြို့ဟာ ရှေးခေတ်မင်းဆက် ၆ခုရဲ့ မြို့တော်ဟောင်း ဖြစ်ပါတယ်။

Learner 14 use incorrect usage ခု instead of ဆက်. ခု is general classifier. ဆက် is the generation of kings. When foreigners are not sure, they use it. For the natives, it is an incorrect usage. Therefore, the correct sentence should be နန်းကျင့်မြို့ဟာ ရှေးခေတ်မင်းဆက် ၆ဆက်ရဲ့ မြို့တော်ဟောင်း ဖြစ်ပါတယ်။

This learner used it because it is general usage. Natives can understand this kind of incorrect usage. This would be quite complicated for foreign learners.

vii) Particle for Changing to Adjective (နာမဝိသေသနုပုဒ်ပြောင်းပစ္စည်း)

In Burmese grammar, particle for changing to adjective is "သော၊ သည့်၊ မည့်" (in speaking "တဲ့၊ မယ့်/မဲ့". When verb combines with this particle, it changes to adjective. (example- လှပ+သော = လှပသော) It is in front of noun.

Example vii (Learner 22)

ခွန်မင်းမြို့မှာ အများကြီး လှပဥယျာဉ် ရှိပါတယ်။

Learner 22 use verb "လှပ" in front of noun "ဥယျာဉ်". This verb needs to change to adjective by adding "တဲ့". Therefore, the correct sentence should be ခွန်မင်းမြို့မှာ အများကြီး လှပတဲ့ဥယျာဉ် ရှိပါတယ်။

viii) Particle for Argument (အငြင်းပြဝစွည်း)

In Burmese grammar, particle for argument is "မ၊ မ . . . ပါ၊ မ . . . နှင့်" (in speaking, မ . . . ဘူး၊ မ . . . နဲ့"). Burmese sentence with negative usage is such as မစားပါ၊ မစားဘူး၊ မစားနှင့်၊ မစားနဲ့.

Example viii (Learner 10)

ထို့ကြောင့် ကျေရာပွန်ဂျီ ခရီးသွားရင် ထီးမမေ့ပါ။

Learner 10 use verb "မမေ့ပါ". This usage is for self. This sentence is for giving advice to other. Therefore, the correct sentence should be ထို့ကြောင့် ကျေရာပွန်ဂျီ ခရီးသွားရင် ထီးမမေ့ပါနဲ့။

ix) Conjunction for One after Another (တစ်ခုပြီးတစ်ခုပြသမှုနွဲ့)

In Burmese grammar, conjunction for one after another is "ကာ၊ ဤ" (in speaking, "ပြီး"). This usage is used for verb. If we use for noun or other, we need to add "ဖြစ်/ရို" in front of it.

Example ix (Learner 27)

စည်းလုံးမြို့က တစ်နှစ်လုံး အအေးဆုံးနဲ့ ခဏခဏမိုးရွာပါတယ်။

Learner 27 wrote one after another, အအေးဆုံး and ခဏခဏမိုးရွာပါတယ် by connecting with incorrect conjunction "နဲ့". အအေးဆုံး is not verb. Therefore, we need to add "ဖြစ်" in front of "ပြီး". The correct sentence should be စည်းလုံးမြို့က တစ်နှစ်လုံး အအေးဆုံးဖြစ်ပြီး ခဏခဏမိုးရွာပါတယ်။

x) Conjunction for Combination (ပေါင်းစည်းပြသမှုနွဲ့)

In Burmese grammar, conjunction for combination is "လည်း . . . လည်း၊ သာမက . . . လည်း၊ ရုံသာမက . . . လည်း၊ အပြင် . . . လည်း". This usage is used for combination 2 nouns or 2 verbs or 2 sentences. (example- ညီညီသာမက ကိုကိုလည်း ပေါင်မုန့် စားတယ်။ -for 2 nouns, ညီညီက ပေါင်မုန့်စားရုံသာမက ကိတ်မုန့်လည်း စားတယ်။ -for 2 verbs or 2 sentences)

Example x (Learner 26)

ခွန်မင်းမြို့ဟာ ရှုခင်းသာဟာသာမက လူမျိုးလည်း စိတ်အားထက်သန်တယ်။

Learner 26 use incorrect conjunction "သာမက" for combining 2 sentences instead of "ရုံသာမက". Therefore, the correct sentence should be ခွန်မင်းမြို့ဟာ ရှုခင်းသာဟာရုံသာမက လူမျိုးလည်း စိတ်အားထက်သန်တယ်။

xi) Conjunction for Opposition (ဆန့်ကျင်ပြသမှုနွဲ့)

In Burmese grammar, conjunction for opposition is "သို့ရာတွင်၊ သို့သော်၊ သို့သော်လည်း၊ သော်လည်း" (in speaking, "ဒါပေမယ့်၊ ပေမယ့်"). This usage is used for opposition 2 sentences in different meanings. They are different in 1 sentence or 2 sentences. (example- "နီနီက ကြက်ဥ မကြိုက် ပေမယ့် ကျန်းမာရေးအတွက် စားတယ်။" -1 sentence, "နီနီက ကြက်ဥ မကြိုက်ဘူး။ ဒါပေမယ့် ကျန်းမာရေးအတွက် စားတယ်။" -2 sentences)

Example xi (Learner 18)

လန်ဒန်မြို့ကို အရမ်းကြိုက် ဒါပေမယ့် လန်ဒန်မျိုး အရမ်းဈေးကြီးပါတယ်။

Learner 26 use incorrect conjunction "ဒါပေမယ့်" for combining 2 sentences instead of "ပေမယ့်". Therefore, the correct sentence should be လန်ဒန်မြို့ကို အရမ်းကြိုက် ပေမယ့် လန်ဒန်မျိုး အရမ်းဈေးကြီးပါတယ်။

xii) Conjunction for Reason (အကြောင်းပြသမှု)

In Burmese grammar, conjunction for reason is "၍၊ နှင့်၊ သဖြင့်၊ သောကြောင့်၊ ကြောင့်" (in speaking, "ကြောင့်၊ လို့"). It depends on that they are after noun or verb. (example- "ဆရာမက သူ့ကြောင့် စိတ်ဆိုးတယ်။" -after noun, "သူက မိုးရွာလို့ ကျောင်းမသွားဘူး။" -after verb)

Example xii (Learner 5)

ဆောင်းရာသီမှာ ရွက်က အနီရောင်ကို ပြောင်းသလို လှပါတယ်။

Learner 26 use incorrect conjunction "သလို" for reason instead of "လို့". Therefore, the correct sentence should be ဆောင်းရာသီမှာ ရွက်က အနီရောင်ကို ပြောင်းလို့ လှပါတယ်။

xiii) Speaking and Writing (အပြောအရေး)

In Burmese grammar, the differences between speaking usage and writing usage are commonly known by the foreigners, though it is not easy to use for them. However, the incorrect usages might not twist the meaning of the sentence. It is quite complicated for foreign learners.

Example xiii (Learner 30)

အဘယ်ကြောင့်ဆိုသော် ကြားတွင် world war II ထင်ရှားသော ရှိပါတယ်။

Learner 30 use writing usage "အဘယ်ကြောင့်ဆိုသော်", "တွင်" and "သော" instead of speaking usage "ဘာဖြစ်လို့လဲဆိုတော့", "မှာ" and "တဲ့". Therefore, the correct sentence should be ဘာဖြစ်လို့လဲဆိုတော့ ကြားမှာ world war II ထင်ရှားတဲ့ ရှိပါတယ်။

From the above examples, the learners could be due to the lack of exposure to the local culture or lack of chance to use in real practice. The intermediate level students always have a myth in mind, longer sentence is better. Somehow which is true in Burmese writing. However, because the skill level is only intermediate, the sentence structure would not be smooth in some usage. Another problem is the using of grammatical words to indicate the places or subjects.

Discussion

According to the findings, there are some grammatical items for foreign learners in learning Burmese. The grammatical problems are particles, conjunction, and sentence structures or

syntax. To resolve the problem of found grammatical errors, the readjustment of the basic level curriculum is an alternative. This curriculum must be structured by concluding general grammar items and exercises that are useful in real life.

Another item is "Bilingual mutual understanding". According to the examples in this study, the mother-tongue language of the foreign learners might affect their learning. The differences between Burmese and foreigners' mother-tongue language can mess up in daily usages. The main problem of this fact is thinking from the translation of mother-tongue language before writing or speaking Burmese. This problem is common if the sentence structures of mother-tongue language and Burmese are similar. If not, both teachers and students, all, must be careful in teaching and learning.

Another factor is the strength of the writing competence. It means that the more practice in learning Burmese four skills, the more careful in writing skill. Because practicing for writing skill is the easiest way to remember important basic usage for other skills. So, various practice with different contexts seems importance to eliminate the errors in usage.

Implications

There are two awareness that we should pay attention to. They are:

- 1) Pre-stage awareness and
- 2) Tailor-made awareness (learner-centered).

1) Pre-Stage Awareness

For pre-stage awareness, first, the curriculum should provide the grammatical differences since basic level. Because many curricula are prepared for four skills without grammar. Even concluding with grammar, only giving basic usages such as noun, pronoun, verb, subject, object, and the sentence structure such as subject + verb. Other usages and structures are being proficiency by practicing four skills in real life.

Second, not only foreign learners but also native teachers should be careful that learning and teaching must be based on the differences between speaking and writing in Burmese since basic level. If they do not care about these variations, they cannot reach for better teaching and learning in Burmese.

Final, learning language is not one-man band. For this fact, learners must go to public and practice in real life. Because practice in real situation is crucial.

2) Tailor-Made Awareness

For tailor-made awareness, teachers should identify the strengths and weaknesses of the learners beforehand. Teachers can prepare for students by students' proficiency level and nationalities. A good preparing is pre-testing students' needs on first lecture day.

Then, different exercises should be given according to individual needs. This approach can use during teaching period or one semester. After teaching first week or some weeks, teachers can know about the needs of each student in the class. Giving different exercises as the need of each student is really helpful for learners.

And then, the exposure of the usage in daily activities should be emphasized. Because teaching and learning language is not for one person. It is for communication. If teachers want students to be proficiency in language, they should add daily usages in lessons, give activities or projects connecting with daily life and listen to and explain students' questions out of the class.

Conclusion

This is a case study about 30 foreign learners learning Burmese as a foreign language in the intermediate level. Based on their writing, there are 23 grammatical errors are being identified. They are further classified as (1) Syntax misused; (2) Word misplacement; and (3) Usage inappropriateness. To improve the intermediate level of Burmese learning for the foreigners, the pre-stage awareness of the grammatical teaching content in the basic level is crucial. The tailor made of the explanation of the grammatical usage to different mother-tongue learners might ease the grammatical misunderstanding in Burmese throughout the learning process.

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Contact email: lwinninikhine@gmail.com

Elimination Mechanism of Glue Variables for Solving SAT Problems in Linguistics

Ziwei Zhang, Beijing University of Posts and Telecommunications, China
Yang Zhang, Beijing University of Posts and Telecommunications, China

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Abstract

We propose GVE(Glue Variables Elimination), an algorithm that organically combines neural networks with a deterministic solver to solve SAT(Boolean satisfiability problem) in the field of linguistics. It gives full play to their respective advantages by following steps: (a) applying a graph learning algorithm to learn the structure of the CNF formula; (b) finding the glue variables of the problem; (c) determining their values; (d) simplifying the original formula; (e) using a deterministic solver to solve the simplified problem. We use SATCOMP 2003-2019 benchmarks as the test data sets, and compare our model with the SAT solver CADICAL that has performed well in SATCOMP 2019 as well as the neural network model PDP proposed in recent years. GVE model shows good performance. As the complexity of the problem increases, the solution time can be about 20%-95% quicker than the deterministic solver, while at the same time around 72% more accurate than PDP model.

Keywords: Linguistics, Boolean Satisfiability Problem, Graph Learning, Survey Propagation, Reinforcement Learning, Glue Variables

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Introduction

In industrial production, many questions can be converted into satisfiability questions (Constraint Satisfaction Problems (CSP)(Kumar, 2015)), especially Boolean satisfaction problem(SAT). Boolean Satisfiability, in particular, is the most fundamental NP-complete (Garey & Johnson, 1979) problem in computer science with a wide range of applications in various areas(Biere, Heule & van Maaren, 2009; Knuth, 1997). There is no deterministic Turing algorithm to solve the SAT problem in polynomial complexity(Van Leeuwen, 1991). However, SAT problems are inevitable in practical application, for example, in the fields of engineering technology, complexity theory(Karp, 1972; Aho & Hopcroft, 1974), military, artificial intelligence(Vizel, Weissenbacher & Malik, 2015), concurrency control, transportation, intelligent traffic control and so on. From the point of view of problem solving, complete algorithm, represented by Davis-Putnam proposes based on the recollection search(Nieuwenhuis, Oliveras & Tinelli, 2005; Zhang & Malik, 2002), can solve both satisfiability problems and unsatisfiable problems, though it can take a long time.

Machine Learning has been used for different aspects of CSP and SAT solving from branch prediction(Liang, Ganesh, Poupart & Czarnecki, 2016) algorithm to hyper-parameter selection(Xu, Hutter, Hoos & Leyton-Brown, 2008). These algorithms all encode the input SAT instances to different degrees while interconnectedness of the CNF formula exists in its original structure. There is a serious risk that those feature extraction techniques will lose the hidden information of the formula during procedure of data processing. For instance, frameworks such as Graph Neural Network(Li, Tarlow, Brockschmidt & Zemel, 2015), PossibleWorldNets(Evans, Saxton, Amos, Kohli & Grefenstette, 2018), NeuroSAT framework(Selsam et al., 2018), the Circuit-SAT framework(Amizadeh, Matuskevych & Weimer, 2018) and Recurrent Relational Networks for Sudoku(Palm, Paquet & Winther, 2018) et al. have been quite successful in capturing the inherent structure of the SAT instances by embedding them into traditional vector spaces that are suitable for Machine Learning models. However, they don't have a persuasive explanation why their networks effective and how they work. Most importantly, their accuracy has a sharp decline as the number of variables or complexity of the SAT problems increases. Furthermore, the previous researches of solving SAT problems that use pure neural network (e.g. PDP(Amizadeh, Matuskevych & Weimer, 2019)), show a decline trend of performance with the increment of problem scale, most of which are limited by the structures of CNF formulas. The uncertainty of their results also make them have little practical value.

Our contributions are as follows:

(a) The method of graph learning and representation proposed by Hamilton, Ying and Leskovec(2017) is used for the sake of learning internal features of SAT problems. Different from the previous work, which only has one kind of node in the graph, our graph has two kinds of nodes. We see the CNF formula as a bipartite graph with literals and clauses as the two type of nodes, and train a set of aggregator functions based on Random Walk(Spitzer, 2013) and Graph Convolution Network(Geng et al., 2019) that learn to aggregate feature information from a node's local neighborhood that contains both variable nodes and clause nodes. In this way, we are able to adapt to the different CNF structures and train a general solver to solve all kinds of questions which can significantly improve efficiency.

(b) Considering that the performance of neural model is limited by the complexity of the problem, we do not attempt to solve the whole question, but rather focus on finding out glue variables and their values -- those likely to occur in glue clauses(Audemard & Simon, 2009),

a type of conflict clauses known to be extremely important to the reasoning of modern CDCL(Heule, Kullmann, Wieringa & Biere, 2011) SAT solvers as a reinforcement task and then solve them through a Survey Propagation Algorithm idea based neural network. Finally we use the complete solver CADICAL (QUEUE, 2019) to solve the simplified formula. Furthermore, our framework is designed in unsupervised manner that allows GVE to be trained without training data markup.

(c) Unlike previous works only give a answer either “satisfiable” or “unsatisfiable”, for the UNSAT CNF, we not only show the result, but also the *UnsatCore* -- the combination of clauses whose subsets are still unsatisfiable, is derived as a proof of the answer.

We evaluate our algorithm on thousand near CNF instances that chosen from SATCOMP 2013-2019 benchmarks. Our experimental results show the superiority of the GVE framework compared to both neural and classical solvers.

Preliminaries

A propositional logic formula, also called Boolean expression, is built from variables, operators AND (conjunction, also denoted by \wedge), OR (disjunction, \vee), NOT (negation, \neg), and parentheses. The SAT problem is to check whether a given formula is satisfiable or not. If a variable assignment exists which can make every clause TRUE, the formula is called satisfiable. On the other hand, if no such assignment exists, the function expressed by the formula is FALSE for all possible variable assignments and the SAT problem is unsatisfiable. A disjunctive expression of a finite number of variables is called a clause. A formula is in conjunctive normal form (CNF) if it is a conjunction of clauses (or a single clause).

1.1. Solving Algorithms Bases

Glue levels and glue variables *Glue variable* is an important concept in CDCL algorithm (Conflict-Driven Clause Learning) proposed by Heule et al.(2011). Here we introduce the concept of *unit propagation*(Nieuwenhuis et al., 2005): given a clause $C = l_1 \vee l_2 \dots \vee l_n$, if all literals but l_n are set to 0, then C is equivalent to the unit clause (l_n), and the value of l_n is forced to 1. *Glue level* counts the number of decision levels involved in the clause. A clause with low glue level requires fewer decisions to become unit. Variables in clauses with glue level ≤ 2 are called *glue variables*. Finding glue variables had greatly improved the performance of existing technologies and has now become a standard practice.

SP Algorithm

SP (Survey Propagation) (Braunstein, Mézard & Zecchina, 2005; Mezard & Montanari, 2009) algorithm is a typical incomplete algorithm of which principle is derived from the theory of the spin glass system (Sherrington & Kirkpatrick, 1975) in statistical physics. SP applies a message passing technology to pass the probability of the variable to make the clause it located unsatisfiable, and then uses the investigation iteration function to repeatedly calculate the message passed in the factor graph. If this process converges, a set of marginal probability distributions of the values of all variables will be finally obtained. Through the probability distribution, the possible value of each variable can be known. Then the SP algorithm uses the Walksat(Hoos, 2002) algorithm to fix one or some variables to simplify the original problem. Walksat is an extension of Random Walk. Their fundamental idea is to randomly generate an initial assignment, and then select a variable to flip under certain conditions until

the maximum number of flips is reached or a solution is found. If the problem is satisfiable, a set of solutions can be finally obtained after repeating the above process.

1.2. Graph Representation

Figure 1 shows the graph representation model of clauses and variables. Circles represent variable nodes, and squares represent clause nodes. There are two types of edges, which represent the sign of the variable in the clause. This graph model can establish the adjacency matrix between variables and clauses, and can intuitively reflect which clauses a certain variable is related to. For example, clause a has three variables x_1, x_2, x_4 , so the origin formula can be represent as $a = x_1 \vee x_2 \vee \bar{x}_4$. In the same way, the formula F in the figure can be restored to the original mathematical expression:

$$F = \{(x_1 \vee x_2 \vee \bar{x}_4), (x_3 \vee x_4), (\bar{x}_1 \vee x_5)\} = \{a, b, c\}$$

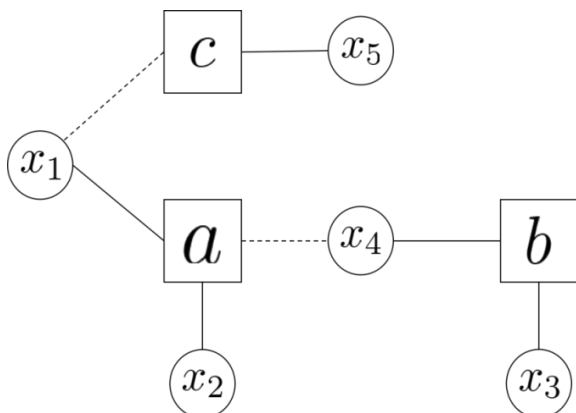


Figure 1: Graph Representation Structure of Clauses and Variables

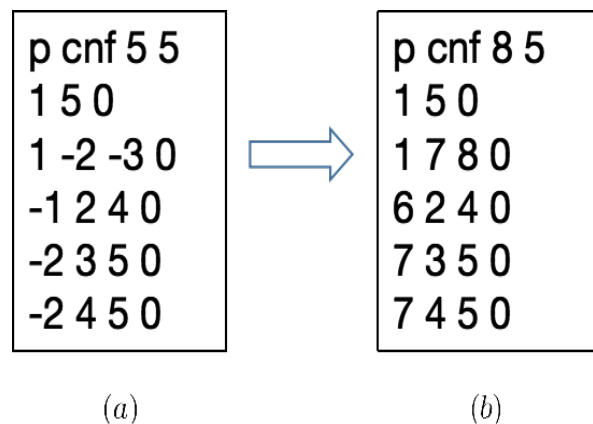


Figure 2: A CNF Conversion Example

In order to ignore the signs in the original formula during training, we split the variables into positive and negative terms, and regard the negative form of each variable as a new variable. Figure 2 shows a CNF conversion example intuitively. As for training, for a CNF formula with M clauses and N variables, it will eventually be expressed as an $m \times n$ 0-1 matrix $G_{<\chi, \epsilon>}^+(G^+)$ which contains all positive variables and $m \times n$ matrix $G_{<\chi, \epsilon>}^-(G^-)$ which contains their negations.

Instead of training a distinct embedding vector for each node as traditional graph representation methods do, we train a set of aggregator functions that learn to aggregate feature information from a node’s local neighborhood. Each aggregator function aggregates information from a different number of hops, or search depth, away from a given node.

2. Network Architecture

Since it is difficult to solve the difficult SAT problems by using pure neural networks, we introduce the idea of model compound -- the combination of neural networks and a deterministic solver. The key to solve the SAT problem is to find out the key variables in CNF so as to simplify the original formula. When interacting with the deterministic solver, the model continuously modifies the prediction results of key variables through Reinforcement Learning. Meanwhile, to adapt the solver to different structures of CNFs and

find glue variables of SAT problems, we design a suitable network pattern that could solve CNFs via neural networks. Figure 3 shows the overall flow chart of our algorithm. We will describe the steps that need to take to reach the ultimate goal in this chapter .

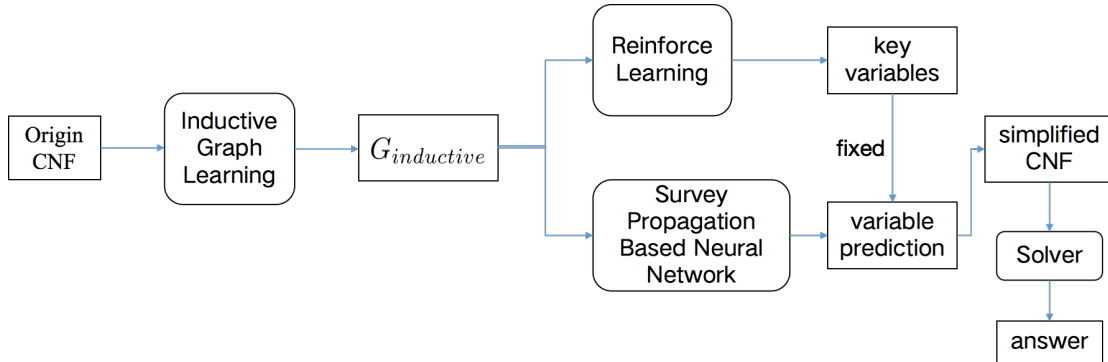


Figure 3: Overall Flow of the GVE Algorithm

The CNF formula is transformed into a bipartite graph $G(\chi, \epsilon)$ where χ and ϵ are a collection of variables and Boolean symbols, respectively. There are two types of nodes representing variables and clauses in graph G . The Boolean symbol ϵ_{ij} where $\{\epsilon_{ij} \in \epsilon, 1 \leq i \leq M, 1 \leq j \leq N\}$ connecting the j th clause and the variable x_i indicate that the clause contains the variable.

Based on the above, for a SAT problem with M clauses, we define a way of measuring model as

$$W(G) = \frac{1}{M} \prod_{f=1}^M L_f(G_{\partial f}, V_{\partial f}) \quad (1)$$

where G to represent the graph structure, that is, the combination of the output result of the previous step and the corresponding graph structure of the original CNF formula. $V_{\partial f}$ is the variable embedding results that related to some clause f . L is an abstract representation of our entire network structure which contains graph representation layer, glue variables prediction layer and variables value prediction layer.

2.1. The Inductive Graph Learning

We adopts an unsupervised training method, assuming that each variable takes a value of true to determine the label of the clause, that is, if all the literals of the clause are negative, the clause is negative. A group of aggregator functions is trained to aggregate feature information from adjacent nodes list of a node from which we randomly sample in the process of graph learning. In our model, clauses and variables are used as learning nodes respectively. **The list of adjacent nodes is the set of all clauses that are related to the variables in the clause, and the set of all the variables that appear in the same clause with a certain variable.** In the figure below, orange circles represent clause nodes, and blue circles represent variable nodes. Take node 1 as an example, it will aggregate the characteristics of all adjacent nodes, and the arrow represents its source of information. In summary, the adjacent list of variable 1 contains clause nodes a, b and variable nodes 2,3,4,5. Thus, we complete the bidirectional transmission of feature information. Figure 5 indicates the binary encoding method of a CNF. As shown, the left and right half of Figure 5(b) represent V^+ and V^- , respectively.

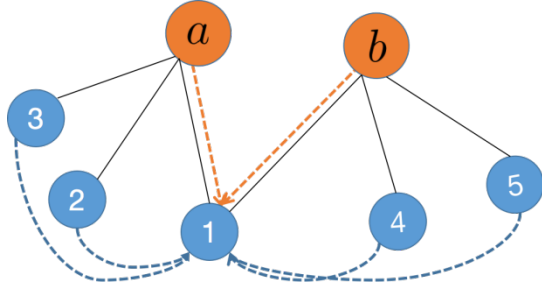


Figure 4: Schematic Diagram of the Two Sources of Feature Aggregation

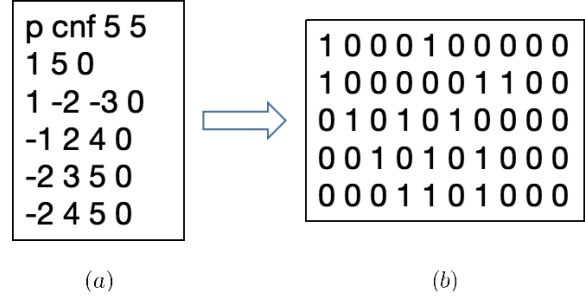


Figure 5: Binary Encoding Example of a CNF

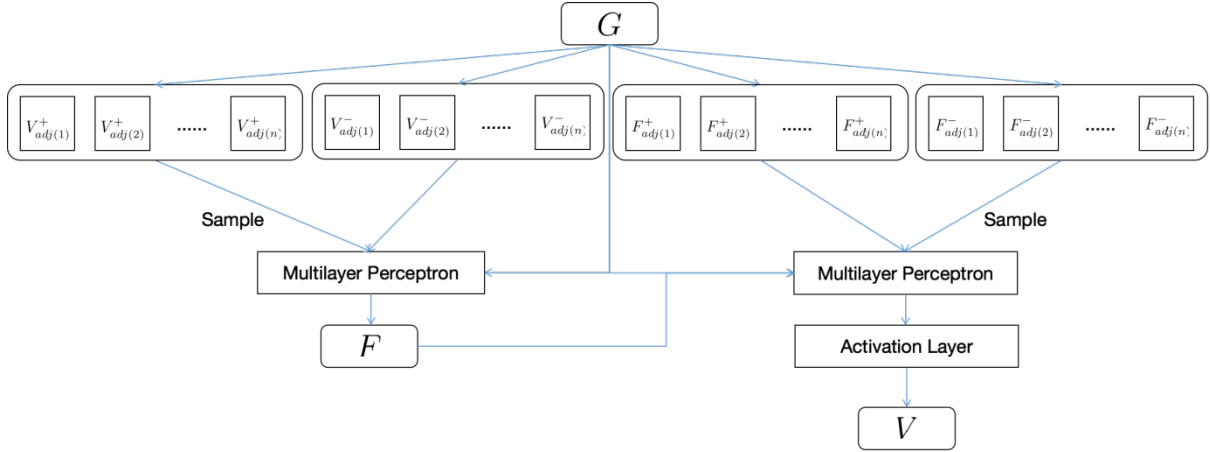


Figure 6: Architecture Diagram of Graph Aggregation

Figure 6 shows the architecture diagram of graph aggregation. For each variable v there will be a list v_{adj} “adjacent” to it, which contains all variables that have a direct or indirect relationship with it. Therefore, according to the aforementioned classification, the adjacent list is also expressed as V_{adj}^+ and V_{adj}^- . We encode them so that each variable can fully learn the characteristics of the variables related to it. We use the formula below to update V^+ and V^-

$$V = \Gamma_{\kappa}(G, V, V_{adj}) \tag{2}$$

where Γ_{κ} is a multi-layer linear neural network with κ as the parameter. Since the graph transformed by CNF is a bipartite graph with two kinds of nodes, we need to aggregate again

$$V = \Gamma_{\rho}(G, V, F_{adj}) \tag{3}$$

where F_{adj} represents the list of clauses that contains the variable -- that is, all the clauses in which the variable appears and ρ is a learnable parameter. Take the CNF formula in figure 2(a) as an example, variable 1 corresponds to clause 1, 2. In this way, we get the updated V^+ and V^- , and finally stitch them together to get the summarized graph structure

$$V = \Upsilon_{\alpha}(concat(V^+, V^-)) \tag{4}$$

where Υ is the activation layer with α as the parameter.

2.2. The Survey-Propagation Based Neural Model

After the steps of graph learning, we can be compatible with different CNF structures. Next, we designed a neural network based on the idea of Survey Propagation algorithm so that messages are passed between clauses and variables. For the convenience of representation, we define matrix $E_v \in \mathbb{R}^{e \times 2 \cdot n}$, that is, $E_{ij} = 1$ if there is an edge from variable x_j to some clause c . Likewise, $E_f \in \mathbb{R}^{e \times m}$, which represents the relationship from clauses to edges.

$$F_{x \rightarrow c} = \Gamma_\delta(V, E_v, G) \quad (5)$$

$$V_{c \rightarrow x} = \Psi_\beta(\Gamma_\eta(V, E_f, G)) \quad (6)$$

where E_v and E_f are matrices representing the relationship among edges, variables and clauses, and $\Gamma_\delta, \Gamma_\eta$ are linear neural networks parameterized by different vectors δ and η . Γ_δ and Γ_η are designed for calculating the value of ‘‘survey information’’ transmitted to each other. Notably, we have used the main idea of survey propagation algorithm to model Ψ_β . Next we divide $V_{c \rightarrow x}$ into positive and negative parts: $V_{c \rightarrow x}^+, V_{c \rightarrow x}^-$. Thus the main steps in Ψ_β can be described as:

$$V_{x \rightarrow c}^0 = V_{c \rightarrow x}^+ + V_{c \rightarrow x}^- \quad (7)$$

here the variable $V_{x \rightarrow c}^0$ is for no effect to some clause. Then we update $V_{c \rightarrow x}$ as follows:

$$V_{x \rightarrow c}^u = V_{c \rightarrow x}^+ \cdot (1 - V_{c \rightarrow x}^-) \quad (8)$$

$$V_{x \rightarrow c}^s = V_{c \rightarrow x}^- \cdot (1 - V_{c \rightarrow x}^+) \quad (9)$$

$$V_{c \rightarrow x} = \frac{V_{x \rightarrow c}^u}{V_{x \rightarrow c}^u + V_{x \rightarrow c}^s + V_{x \rightarrow c}^0} \quad (10)$$

Finally, in order to keep track of arbitrary long-term dependencies in the messaging queue, we apply recurrent neural network(Mikolov et al., 2011; Hochreiter & Schmidhuber, 1997) units to Φ_θ and Φ_ι , that is

$$F = \Phi_\iota(F_{x \rightarrow c}) \quad (11)$$

$$V = \Phi_\theta(V_{c \rightarrow x}) \quad (12)$$

where ι and θ are parameter vectors. In the process of solving the CNF problem, we use the Sigmoid function(Finney, 1952) as the activation layer of the model, hence all the variable value can be mapped to (0, 1).

2.3. The Reinforcement Learning Model

This step and the previous step are executed synchronously and can be seen as the typical framing of Reinforcement Learning(Boctor, 2013; Levin, Pieraccini & Eckert, 1998) scenario: our model generates some variables just like the actions taken by the agent, which are interpreted into a reward and a representation of the state, and then fed back into the agent.

We apply batch normalization(Bjorck., Gomes, Selman & Weinberger, 2018) to the result of graph learning step to improve learning rate. Therefore, the embedding of all clauses can be

obtained as

$$F = \Theta_{\varepsilon}(\Omega_v(G, V)) \quad (13)$$

where Θ_{ε} refers to Batch Normalization layer as described in (Ioffe & Szegedy, 2015) and ε is a parameter that used to ensure the legality of calculations. After obtaining the embedding related to all clauses, we use this value F in turn to derive the embedding value of the variables, and apply a normalization to the intermediate in order to prepare for getting probability distribution of all variables, that is

$$V = \Theta_{\zeta}(\Omega_{\lambda}(G^T, F)) \quad (14)$$

where Θ_{ζ} refers to normalization layer parameterized by the parameter ζ and Ω is a multi-layer neural network with adjustable parameters λ . Finally, we obtain the score distribution \hat{f} of the all clauses, which represents the probability that the clause is a *glue clause*

$$\hat{f} = \text{Softmax}(\Omega_{\mu}(F)) \quad (15)$$

Similarly, we can calculate the probability distribution \hat{v} by following

$$\hat{v} = \text{Softmax}(\Omega_{\lambda}(V, \bar{V})) \quad (16)$$

here μ and λ are different parameters of neural network Ω . The value \hat{v} has provided some inspiration for finding glue variables so that we can use it to combined with the prediction worked out from Section 3.2 to simplify the origin CNF formula.

3. Training a GVE Solver

Figure 7 below shows the schematic flow of GVE algorithm. It can be seen that GVE is mainly divided into three parts, graph learning, variable prediction and CNF simplification.

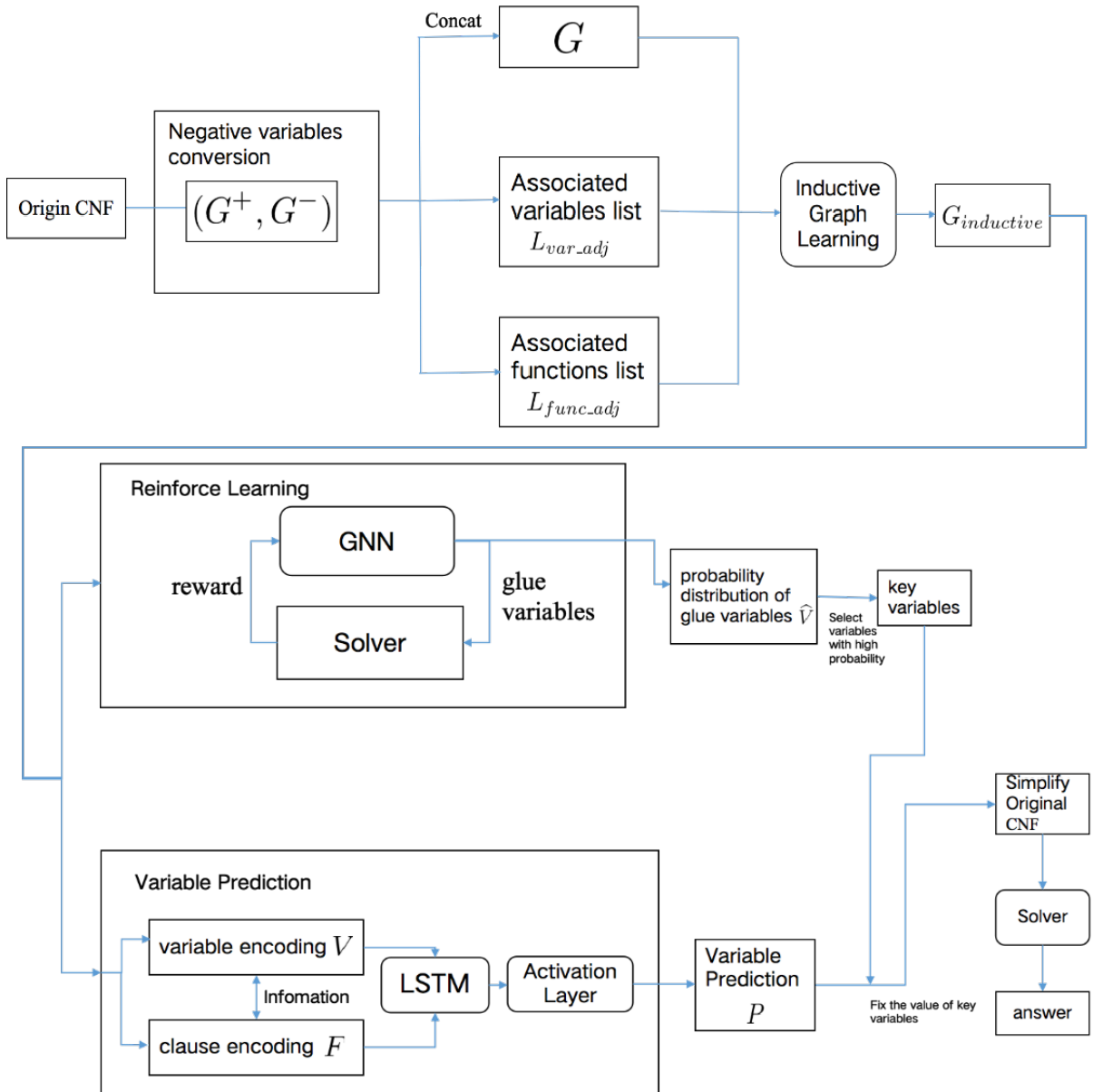


Figure 7: Schematic Flow of the GVE Algorithm

In order to train a GVE model, we would reduce losses from the above three parts, so we define the final loss as

$$loss = loss_{rl} + loss_{sp} \tag{17}$$

where $loss_{rl}$ represents the loss of the glue clause prediction model and $loss_{sp}$ represents the loss of the variable value prediction of the model. We modified the classic glucose solver(Audemard & Simon, 2014) so that we can used it to calculate the LBD scores(Audemard & Simon, 2009) of all clauses, denoted as S_{lbd} . We add up the scores of all the clauses where the variable is located to get the score of the variable. After a softmax operation, we get P_x

$$P_{\chi_i} = \text{Softmax}\left(\frac{\sum_{f_j \ni \partial v_i} S_{lbdj}}{\sum_{m=1}^M S_{lbdm}}\right) \quad (18)$$

For all variables, we can get the probability distribution that if a variable is a glue variable Q_{χ} , so that

$$\text{loss}_{rl} = - \sum_{i=1}^N P_{\chi_i} \log \frac{Q_{\chi_i}}{P_{\chi_i}} \quad (19)$$

where P_{χ} is the probability distribution of glue variables given by the deterministic solver. Hence we achieve the purpose of model adjustment by minimizing the difference between the fitting probability and the target probability.

For reasons of avoiding to label the data before training, we treat the final result as a classification problem for subcategories -- each clause has two categories, corresponding to true or false. We use the most classic cross -- entropy loss function (Parsian & Nematollahi, 1996) of the classification algorithm as the prototype of the loss function

$$\text{loss}_{sp} = - \frac{1}{M} \sum_{i=1}^M \log \frac{\exp(H(f_i)/\tau)}{\sum_{j=1}^M \exp(H(f_i^{(j)})/\tau)} \quad (20)$$

$$H(f_i) = G_{\partial f_i}^+ \cdot V_{\partial f_i} + G_{\partial f_i}^- \cdot (1 - V_{\partial f_i}) \quad (21)$$

where f_i represents a clause in CNF, and $G_{\partial f_i}$, $V_{\partial f_i}$ represents the graph structure and variables related to clause f_i . Note that τ is a temperature parameter (Amizadeh et al., 2019) in the formula, and we will take a larger value as its initial value, and then gradually decrease to 0 during the training process.

Algorithm 1 The GVE Computation Algorithm

Input: Graph $G \in R^{M \times 2 \cdot N}$; Train iterations T ; Number of simplified variables n ; Deterministic solver S

Output: $V^{(t)}$, $\hat{v}^{(t)}$

- 1: **for** $t = 1$ to T **do**
- 2: /*Graph Learning */
- 3: **for** $V_i \in (V^+, V^-)$ **do**
- 4: Compute V using Eqs.(2),(3)
- 5: **end for**
- 6: $V = \Upsilon_\alpha(\text{Concat}(V^+, V^-))$
- 7: /*Variable Prediction */
- 8: **for** $v_i \in G$ **do**
- 9: Compute F, V using Eqs. (5)-(12)
- 10: **end for**
- 11: /*Glue Variables Prediction */
- 12: Compute clause embedding F using Eq. (13)
- 13: Compute probability distribution \hat{f}, \hat{v} using Eqs. (14),(15),(16)
- 14: $V^{(t)} \leftarrow \{v_i : i \in 1 \dots N\}$
- 15: $\hat{v}^{(t)} \leftarrow \{\hat{v}_i : i \in 1 \dots N\}$
- 16: /*Solve CNF when not Training */
- 17: **if** $Training = False$ **then**
- 18: $v \leftarrow \{\hat{v}_i : i \in 1 \dots n\}$
- 19: $CNF_\xi \leftarrow \text{simplify}(V, v)$
- 20: solve CNF_ξ using S
- 21: **end if**
- 22: **end for**
- 23: **return** $V^{(t)}$, $\hat{v}^{(t)}$

Algorithm 1 describes the calculation process of the GVE model. After the step of graph induction learning, the representation V of all variables is obtained. We use V as the basis for obtaining the scores of glue variables and the prediction of all variable values. In the prediction step, we compound the results of the two, select variables with higher scores from the results of the glued variables, where the number of selected variables is related to the number of variables in the original CNF, and then fix these variables according to the results of the variable prediction model. Next we perform the step of ‘‘simplification’’: if the value of a variable is positive after compounding with its sign, we delete the related clause from the original CNF; otherwise, we delete the variable from the clause where it is located. This step greatly simplifies the original problem, so that the simplified CNF can be solved quickly with a deterministic solver.

4. Experiments

We compared our model with two different solutions: (a) recently proposed model PDP(Amizadeh et al., 2019) using pure neural network method, (b) CADICAL(QUEUE, 2019), the top solver in the SATCOMP competition. The experimental data are from the official data sets provided by the SATCOMP 2003-2019. We have compared the above solutions in terms of accuracy and solving speed.

PDP

Since the PDP model has different model training parameters for different data types, we selected representative "modular"(Ansótegui, Giráldez-Cru & Levy, 2012; Walsh, 1999) data as the training set to train the PDP model. The model structure is set with the author's default parameters, and the best model trained is used as the experimental solver. The PDP model has the advantage of batch solving, so in order to facilitate comparison, we record the time to solve each SAT problem separately.

CADICAL

The solver has a lot of parameters that can be configured, and the default settings are used here. We use the "total process time since initialization" in the CADICAL output as its solving time for comparison.

4.1. Data sets

In order to compare the effect of GVE with different solvers, we selected the CNF data set with the number of variables in the range of (0, 3000) from the SATCOMP 2003-2019 competition benchmarks. In several data intervals of the number of variables, it is divided into the following aspects: gradual increase in the number of variables, gradual increase in the the ratio of the number of clauses to the number of variables, and the same number of variables and clauses for comparison.

4.2. Results

Accuracy

Since CADICAL is a deterministic solver, no comparison is made in the part of correctness. The main object of comparison here is the accuracy of GVE and PDP model in multi-interval data sets. To ensure the performance of the trained PDP model, a large number of data sets are needed as training sets. Therefore, in addition to the data provided by SATCOMP, our training sets also contain part of the data generated by the generator. At least 1000 CNFs are prepared for training and 200 CNFs are selected for each data interval in testing process. For the sake of improving the accuracy of PDP, in particular, we use the optional parameter "local_search_iteration" of the model which increases the number of times of randomly flipping unsatisfiable variables after the model is applied. We also set another variable "batch_replication" to increase the number of repeated attempts.

Table 1 is a comparison result of the accuracy of two models. An explanation is needed here. Since PDP is a pure neural network model which does have a good performance when solving ordinary CNFs, but due to the high difficulty of the data we use, it is very difficult to determine all variables only by machine learning. Therefore, its performance is far from satisfactory. Meanwhile, it also shows the original intention of our proposed model from another direction: it is difficult to solve the whole problems, so we can settle for second beat and only solve the core part of the SAT problem, thereby reducing the overall workload.

Name	(0, 500]	(500, 1000]	(1000, 1500]	(1500, 3000)
GVE	81.1%	76.7%	75.01%	72.3%
PDP	6.7%	5.1%	3.2%	1.2%

Table 1: Comparison of the Accuracy of GVE and PDP

In order to improve the accuracy rate, we will try to change the determined variables for the CNF that is “UNSAT” for the first time, and then repeat the simplification and solution process. Figure 8 shows accuracy and average number of retries, which indicates GVE can basically control the number of retries below ten times, which is directly related to the difficulty of the problem.

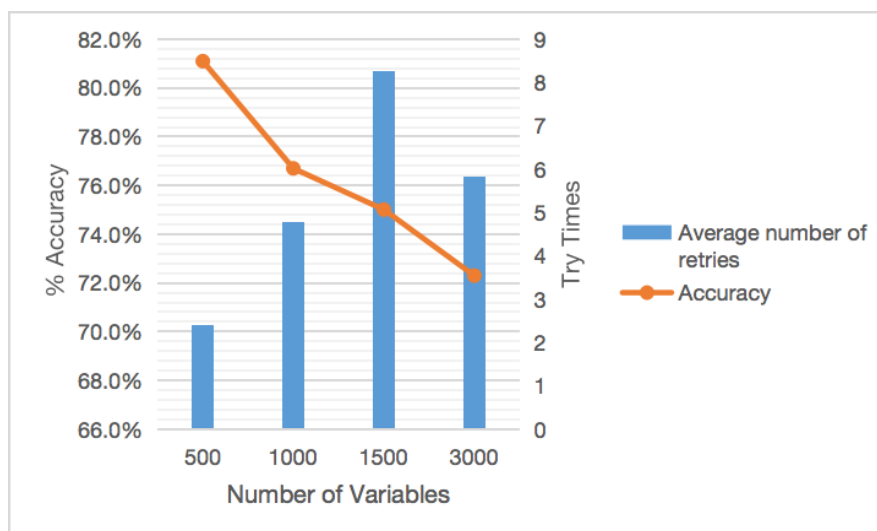


Figure 8: Accuracy of GVE and Retry Times in Different Data Intervals. Retry Times Means that We Change the Number of Variables We Have Determined, Re-simplify and then Pass the New CNF to the Solver for Solution. the Abscissa Represents the Upper Bound of the Clause Number Interval, for Example, 500 Represents the Interval (0, 500).

Degree of Simplification

Due to the fact that GVE uses the idea of machine learning to solve part of the problem, the number of removed clauses which is determined according to the number of simplified variables indicates whether it is good enough to help reduce the workload of the original problem. Figure 9 shows the average reduction ratio of GVE to original CNF formula in different interval data sets. The experimental results shows that after fixing some variables, GVE not only reduces these fixed variables, but also some associated variables are deleted indirectly during the process of simplification because of the deletion of their related clauses.

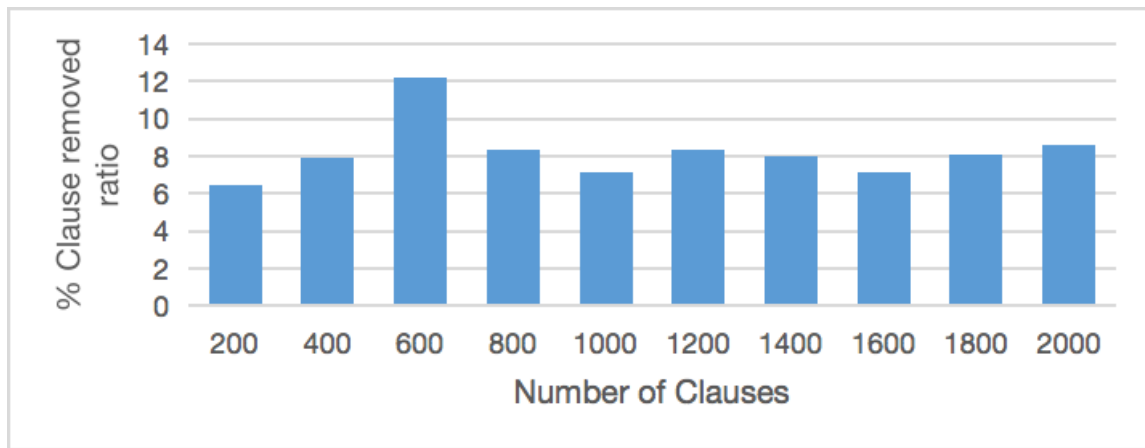
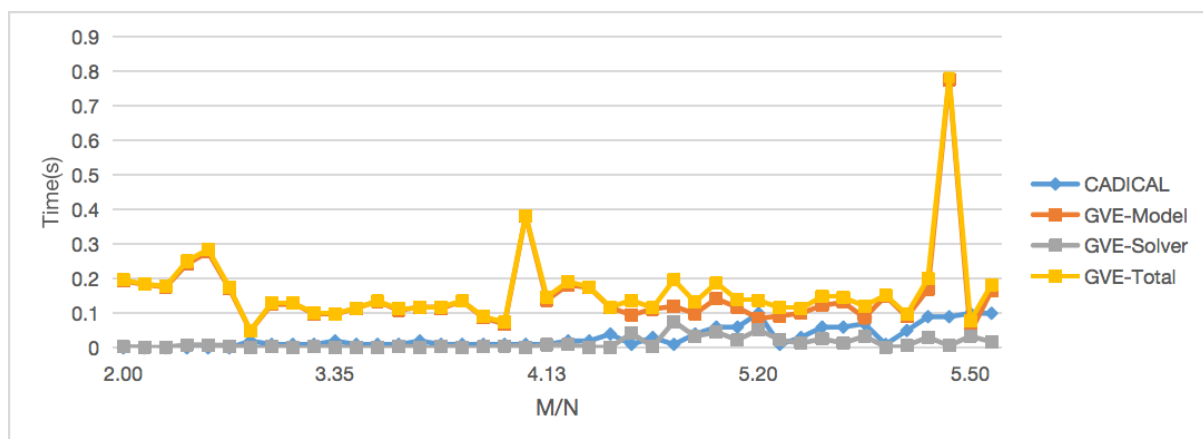


Figure 9: Reduction ratio of GVE to original CNF formula.

Time

The main comparison objects in this part are the GVE model and the CADICAL solver. The following results can be obtained based on the same data set. Note that here we only compare among the data sets where the GVE model can get the correct results, and the data sets for which the correct answer is not available will be ignored. The time of GVE consists of two parts: model solution time(the time to determine the glue variable plus the time to derive the value of the variable), and the time to use the deterministic solver to solve the simplified CNF. In order to ensure the fairness of the comparison experiment, the deterministic solver here also uses CADICAL. We use the "total process time since initialization" value in the output result as the time for this part.

Figure 10-12 shows the comparison results of multiple data intervals. It can be seen from the figures that in the case of a simpler SAT problems, the performance of GVE is similar to the CADICAL solver, and they both takes very little time; as the difficulty of the problem increases, that is, when the complexity of CNF formula gradually increases, the GVE model has a stable performance.



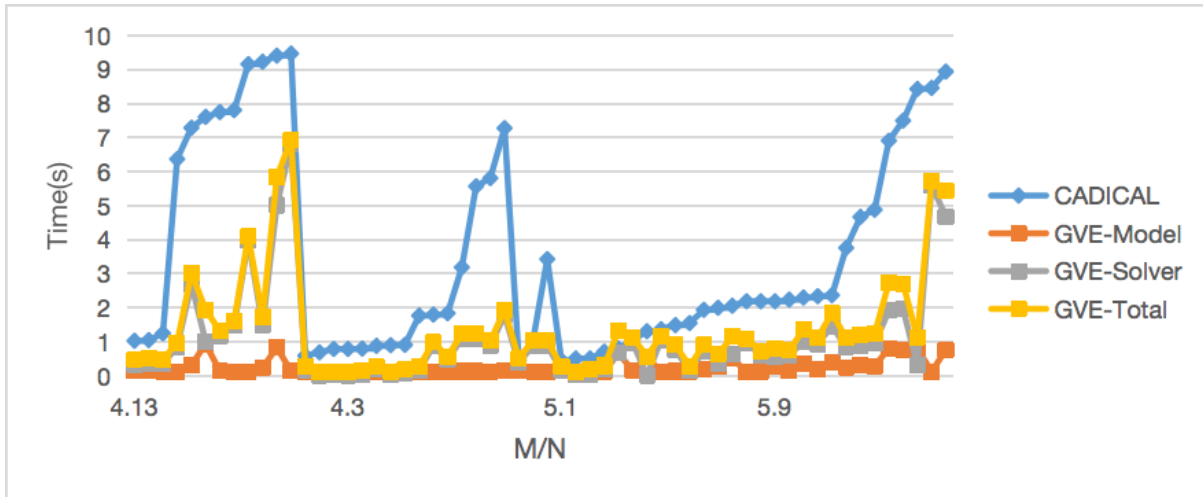


Figure 10: The Time for CADICAL vs. GVE on Simple Cnfs. as the Complexity of the Problem Increases, the Advantages of GVE Gradually Appears.

For those complicated ones, especially the problems that CADICAL needs hundreds of seconds to solve, GVE can also control the solution time to dozens of orders of magnitude, which can be said to have outstanding performance on more complex problems.

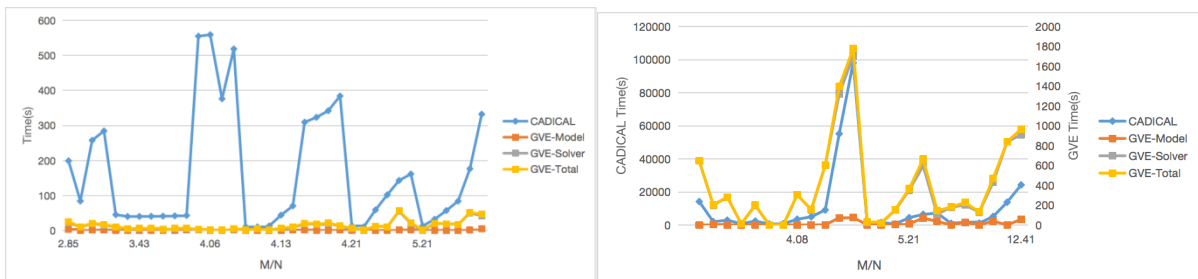
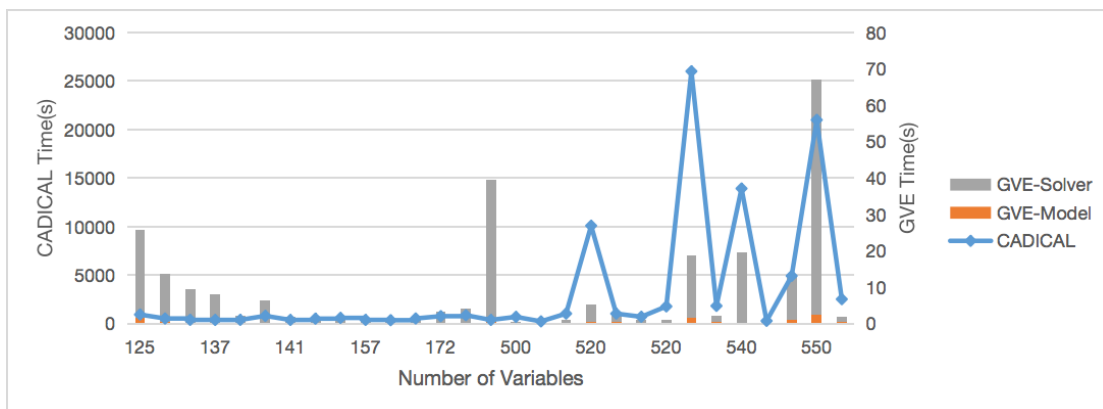


Figure 11: The Time for CADICAL vs. GVE on Hard Cnfs. although CADICAL Performance Fluctuates Greatly, GVE Always Performs Relatively Stable.

In order to analyze the performance of GVE, we also compared the solution time of GVE model and the deterministic solver from the perspective of variable changes.



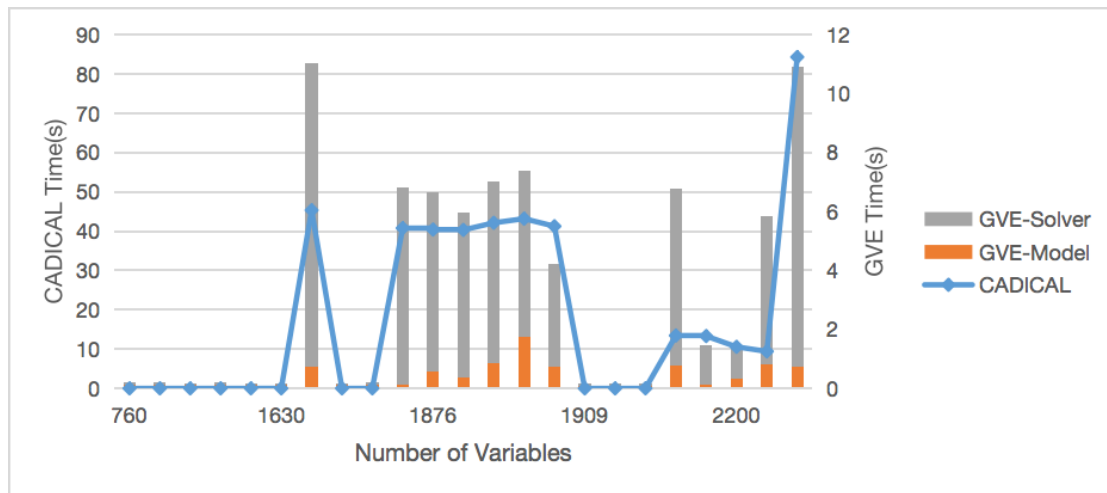


Figure 12: The Time Changes for CADICAL vs. GVE with the Number of Variables.

For a group of CNFs with similar variables, the solution time of the deterministic solver fluctuates greatly. GVE makes the solution time stable within a certain interval by finding and then fixing the glue variables.

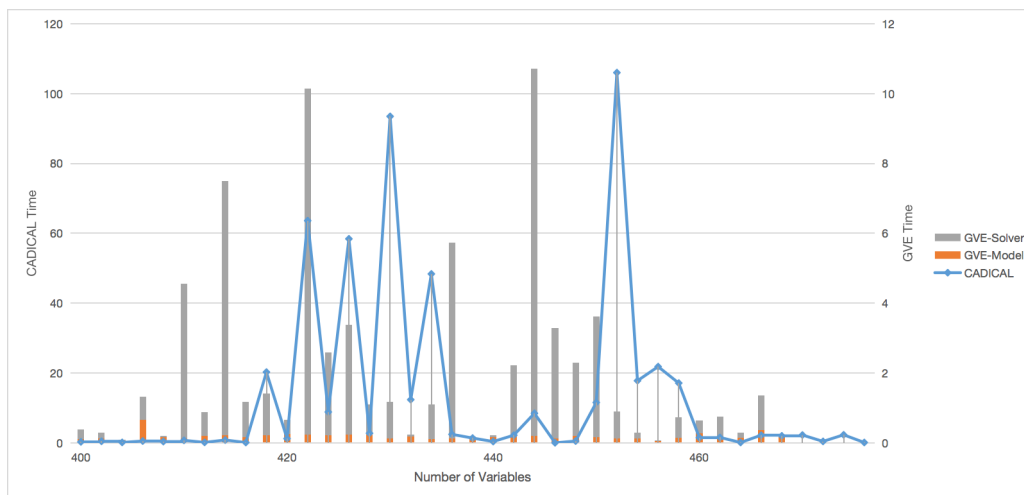


Figure 13: The Time for CADICAL vs. GVE On Cnfs that Have Similar Number of Variables. It Can Be Seen that The Pure Model Part of GVE Performs Stable, that Is, We Can Determine the Glue Variables of a CNF and its Value in a Short Time.

If the solution result of a CNF is UNSAT, in order to improve the accuracy of the GVE model as well as avoiding erroneous results caused by model errors, we will perform multiple calculations on such CNFs. This process is called “downgrade calculation”. In the process of downgrade calculation, GVE will reduce the number of fixed variables, re-simplify the original CNF, and then solve it until the correct result is obtained. Figure 14 shows the change in the number of deterministic variables and the time taken for the downgrade solution.

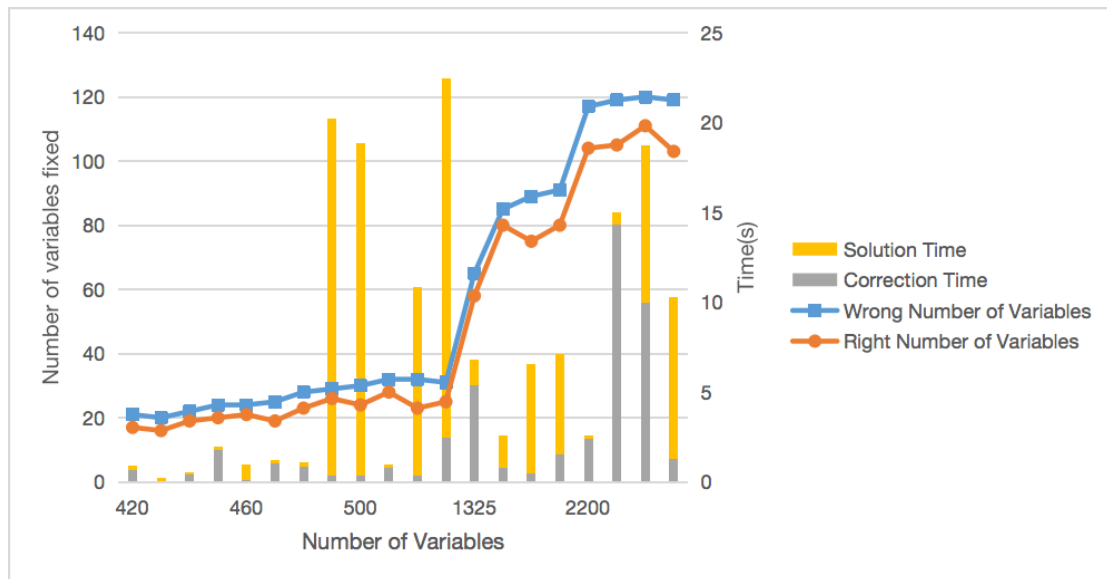


Figure 14: Number of Variables Fixed and Time Required after Downgrade Solution

UNSAT Instances

Excluding errors caused by model errors, there is another possibility that this CNF is indeed UNSAT. Therefore, after a few failed attempts, GVE will start from another angle and try to find the “UnsatCore” of the original problem. Due to the characteristics of UnsatCore, we use the obtained glue variables to form new CNF, designated CNF_{Λ} , which is formed by the original CNF and new clauses that consists of the different combinations of glue variables as well as their signs. Figure 15 shows the comparison of some GVE and CADICAL solution results and solving time they need on UNSAT CNFs.

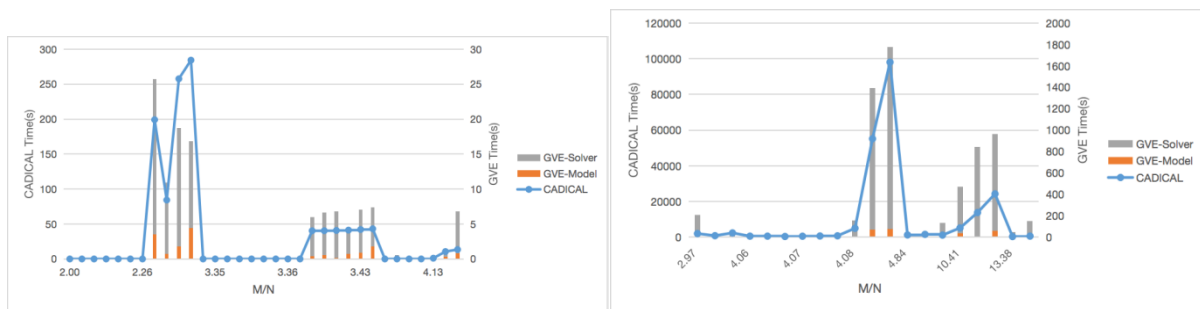


Figure 15: The Time for CADICAL vs. GVE on UNSAT Cnfs. GVE-Solver Time Is the Sum of Time that Solving All Possible CNF Included in CNF_{Λ}

From the above experimental results, it can be seen that GVE is a very useful compound solver. We have also given full play to the advantages of model learning algorithms and deterministic solvers. The idea of partial simplification can greatly reduce the solution time for complex problems. At the same time, UnsatCore, which can solve unsolvable problems, also greatly improves the credibility of the model.

Conclusion

In this article, we propose a composite model GVE to solve complex SAT problems. We apply the idea of graph induction to the learning of CNF structure which avoids the complicated operation of training different models for different types of SAT problems, so

there is no need to classify the data first. Secondly, we use reinforcement learning to find the glue variables and glue clauses of the CNF formula, and then use a neural network model designed based on the idea of SP algorithm to determine the values of the glue variables which are used to process the original SAT problem. Finally we use a deterministic solver to solve the simplified CNF. This approach allows us to fix only the most critical part of the variables for the entire problem, reducing the impact of model errors on problem solving, and at the same time improving the speed of solving complex problems.

Note that GVE may not be effective for originally simple problems, even slower than deterministic solver, but it has a significant performance improvement for those complex problems. This is also our intention of designing this model. GVE model provides an idea of combining neural networks and deterministic solvers, and our results also reveal the tremendous potential for pursuing this goal.

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Contact email: zwzhang@bupt.edu.cn

Role of Learners' Subjective Difficulty Rating Toward a System for Practicing English-Speaking

Harumi Kashiwagi, Kobe University, Japan

Min Kang, Kobe University, Japan

Kazuhiro Ohtsuki, Kobe University, Japan

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Abstract

This preliminary study on how to develop a system for English-speaking practices explores the role a subjective difficulty rating should play in such a system, using a questionnaire and a level-based vocabulary list. By selecting 75 English verbs from the five difficulty levels in the list, 72 Japanese university students rated the difficulty of answering questions in English verbally on a five-point Likert scale. The results suggest that words of difficulty Levels 4 and 5 should be targeted in designing a speaking practice system for the participating students. Moreover, all the selected words in Level 3 offered some response variance in difficulty rating, with standard deviation (SD) scores of 1.0 or higher, suggesting that the choice in the selection of Level 3 words depends on the individual student. Considering the detailed results, all words with SD scores of difficulty ratings lower than 1.0 in Levels 4 and 5 were evaluated as difficult or relatively difficult by more than 80% of the students. This indicates that any speaking practice system should consider words from Levels 4 or 5 for which SD scores in difficulty ratings are lower than 1.0 as difficult words for these students. Although further studies are needed, these results indicate that the average subjective difficulty rating scores can likely provide an indication of the ideal difficulty level to target in an English-speaking practice system. Moreover, SD scores could help customize the target vocabulary for each student.

Keywords: Subjective Difficulty Rating, Speaking Practice, Language Use, Language Learning System.

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Introduction

The Japanese Ministry of Education, Culture, Sports, Science and Technology (2015) created the English proficiency promotion plan to comprehensively develop four core English skills among Japanese students, especially their ability to produce English. However, research has indicated that English language learners have substantial speaking anxiety (Suleimenova, 2013); and this includes Japanese students (Woodrow, 2006). The results of our previous study (Kashiwagi, Kang, & Ohtsuki, 2018) also demonstrated that many students do not feel that they possess English-speaking proficiency. It can therefore be assumed that many Japanese students are not confident about speaking in English. The lack of opportunities for them to speak English in everyday life, outside language classes at school, may contribute to this lack of confidence. A practice environment in which learners can become familiar with speaking English is therefore necessary.

When considering how to promote English-speaking practices, we need to observe which language items are most difficult in spoken English, and identify problematic words and phrases. Thus, we have been developing a prototype system for English-speaking practices (Kashiwagi, Kang, & Ohtsuki, 2020). This system attempts to support learners by providing information on the extent to which they should attempt to use certain words and phrases. This paper describes our preliminary study of exploring how a subjective difficulty rating should play a role in designing a system of speaking practice for students. By using a level-based vocabulary list and a questionnaire on the subjective difficulty levels of English verbs, this study investigates the following research questions:

- RQ1. In selecting words for English-speaking practice, what level of difficulty should be targeted?
- RQ2. For which levels of word difficulty do the difficulty ratings provided by students have the greatest response variance?
- RQ3. Which words do students consider most difficult?
- RQ4. Could a subjective difficulty rating of English words help further develop our system of English-speaking practice in a way that aids learners' use of certain vocabulary?

We conducted this study on Japanese university students, selecting words from the vocabulary list “The New JACET List of 8000 Basic Words” (The Basic Word List Revision Special Committee of JACET, 2016; hereafter, “the New JACET8000”). The remainder of this paper describes our experiment's methodology, a discussion of our results, conclusions, the study's limitations, and recommendations for additional research.

Related Studies

In the field of technology and L2 speaking, some automatic speech recognition functions have been integrated into the language learning software, such as Rosetta Stone®. They enable students to carry out interactive tasks within a limited range. According to McCrocklin (2016), the introduction of this technology helps students become more autonomous in their pronunciation practice. Another research (Blake & Shiri, 2012) reported on the successes and challenges of teaching Arabic within a distance learning environment. One of their findings indicated that small-group computer-mediated communication sessions with sound and text gave students more personal attention. Furthermore, the internet-based 3-dimensional virtual environment called “Second Life” has been integrated into EFL programs. According to Wang, Song, Xia, and Yan (2009), participants perceived “Second Life” as useful and

interesting and perceived the EFL program in this virtual environment as interesting. Jehma (2020) concluded that the students developed their English communication skills through the activity with “Second Life.” Thus, the use of technology has the potential to enhance students’ speaking ability, motivation, and autonomy.

However, few studies have focused on students’ self-assessment of their own performances (Janulevičienė & Kavaliauskienė, 2007). In some cases, self-assessment might be unreliable and not reflective of the learner’s actual performance (Todd, 2002). Nevertheless, it could raise learner awareness of language use and lead to developing learner responsibility and autonomy (Janulevičienė & Kavaliauskienė, 2007). We believe that learners’ subjective difficulty ratings on the detailed learning items play meaningful roles in observing their learning processes.

Our Prototype System

We have been developing a prototype system for practicing English-speaking (Kashiwagi, Kang, & Ohtsuki, 2020). This system aims to support learners by providing information on the extent to which they should attempt to use certain words and phrases. The structure of the prototype system is shown in Figure 1.

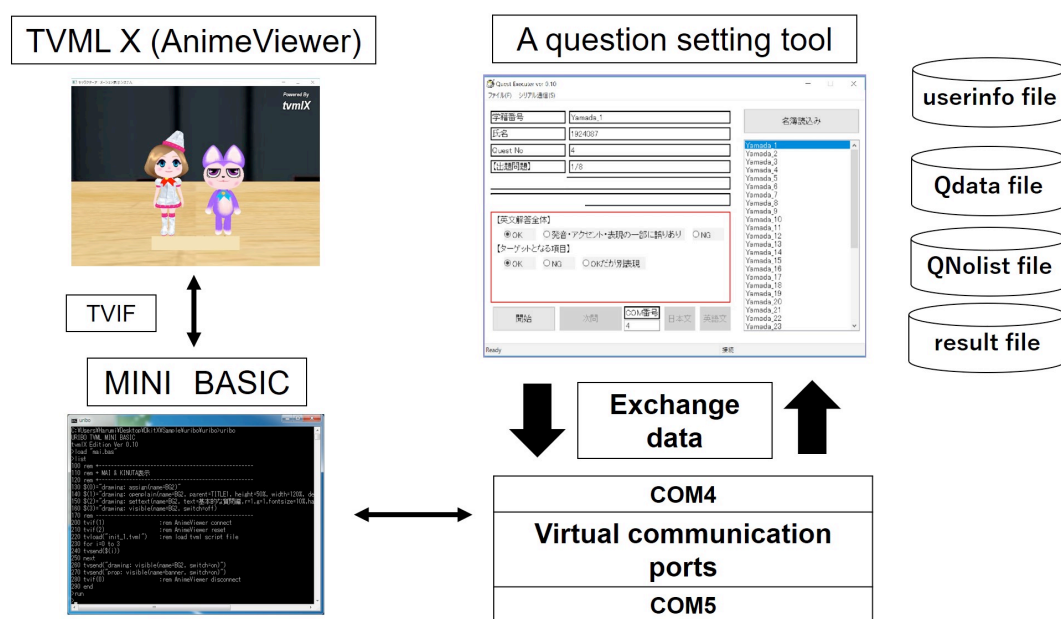


Figure 1: Prototype System Overview

Our system consists of three different types of software: a question setting tool, MINI BASIC, and AnimeViewer. The following provides an overview of how the system operates. When we start the question setting tool, question related data are sent to the software MINI BASIC, and converted into a script file for generating computer-generated (CG) content. CG characters then appear on the screen of the AnimeViewer, a viewer tool for displaying CG content. Next, CG characters give instructions and provide a question, which the student orally answers. While listening to the student’s answer, the teacher checks their answer using the question setting tool. When the system finishes providing questions, and after the answers have been checked, the results are saved in the result file in the question setting tool.

Though our prototype system can check whether students give correct answers, it does not enable us to assess how students truly feel about the difficulty of using certain words. It is important to observe students' reflective assessment about word difficulty to observe their learning situations on an individual basis. Therefore, the role of students' subjective difficulty ratings for selecting the words used in the system must be further explored.

Methods

Word List Creation

Words for our study were chosen from the New JACET8000, an educational vocabulary list intended for Japanese university students who have studied English in middle school, high school, and/or at university in Japan. The list features 8000 words typically used in middle and high school English textbooks, entrance examinations for public high schools and universities, introductory academic books, English newspapers, and standardized English tests such as TOEIC, TOEFL, and STEP (Mochizuki et al., 2016: 75). Eight thousand words are presented in eight levels (Rank 1–1000, Rank 1001–2000, Rank 2001–3000, Rank 3001–4000, Rank 4001–5000, Rank 5001–6000, Rank 6001–7000, and Rank 7001–8000) in accordance with the frequency and educational significance of each word. We selected the words from this list because it reflects the actual situation of English learning among Japanese university students.

In this study, 15 English verbs were chosen from each of the following five levels, creating a total of 75 words: Rank 1–1000, Rank 1001–2000, Rank 2001–3000, Rank 3001–4000, and Rank 4001–5000. We selected the verbs that students would have learned thus far. Words from the highest ranks—Rank 5001–6000, Rank 6001–7000, and Rank 7001–8000—were not included because they would have been too difficult for first-year students to translate orally. Hereafter, we refer to the different ranks as Levels 1–5, where Level 1 means Rank 1–1000, Level 2 means Rank 1001–2000, and so on.

Difficulty Level	Words (and their New JACET8000 ranking)
Level 1 (Rank 1–1000)	decide (560), grow (689), reduce (698), worry (723), share (725), improve (735), apply (741), shake (751), treat (777), remove (802), notice (874), invite (952), solve (953), fix (982), burn (999)
Level 2 (Rank 1001–2000)	bury (1341), complain (1366), confuse (1373), behave (1376), float (1425), accept (1580), publish (1668), regard (1833), hide (1902), ignore (1918), observe (1930), whisper (1932), compete (1952), threaten (1968), propose (1976)
Level 3 (Rank 2001–3000)	calculate (2072), dig (2076), melt (2135), apologize (2143), spoil (2170), invest (2310), analyze (2329), consume (2332), polish (2461), spill (2475), bend (2620), sweep (2630), wipe (2635), evaluate (2838), hesitate (2918)
Level 4 (Rank 3001–4000)	swallow (3421), exhaust (3580), stimulate (3589), infect (3612), suck (3617), abolish (3624), weave (3634), conquer (3638), swell (3639), expire (3646), penetrate (3741), cultivate (3751), summarize (3754), sigh (3804), sew (3910)
Level 5 (Rank 4001–5000)	diagnose (4283), accelerate (4439), shrink (4443), violate (4447), exaggerate (4462), insure (4467), inject (4477),

furnish (4478), starve (4479), contradict (4495), refine (4506), worsen (4522), undertake (4714), resign (4937), reinforce (4963)

Table 1: The Words Used in the Self-Reflective Feedback Questionnaire

Participants

This study's participants comprised 72 first-year students at a university in Japan. They participated in the activity mentioned in the following section, and responded to the self-reflective feedback questionnaire.

Procedures

We administered warm-up activities in the language classes in which Japanese verbs (Table 1) were provided to students, who were then asked to translate them into English orally. A self-reflective feedback questionnaire was then conducted to determine students' difficulty in translating each word into English. The difficulty values were scored using a five-point Likert scale (1= easy, 2= relatively easy, 3= neutral, 4= relatively difficult, and 5= difficult).

Results and Discussion

RQ1: In selecting words for English-speaking practice, what level of difficulty should be targeted?

To determine this, we first calculated the average difficulty ratings for the individual words to investigate student perceptions overall. The average difficulty ratings for the words of each level are shown in Figures 2 to 6. In these figures, the dotted red line indicates neutral difficulty values.

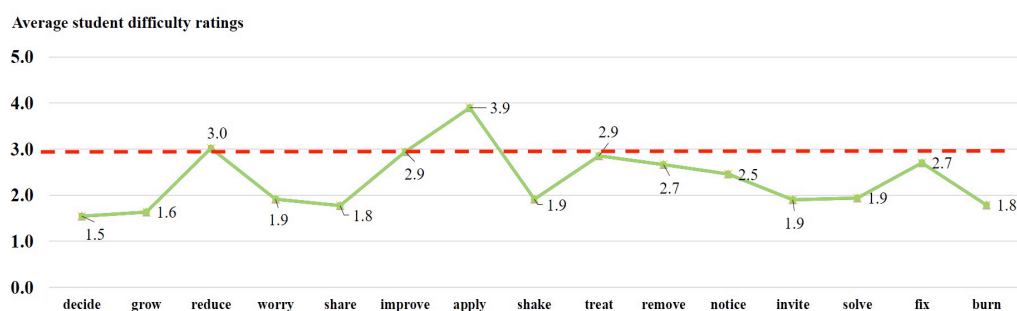


Figure 2: Average Student Difficulty Ratings of the Words in Level 1 (Rank 1–1000)



Figure 3: Average Student Difficulty Ratings of the Words in Level 2 (Rank 1001–2000)

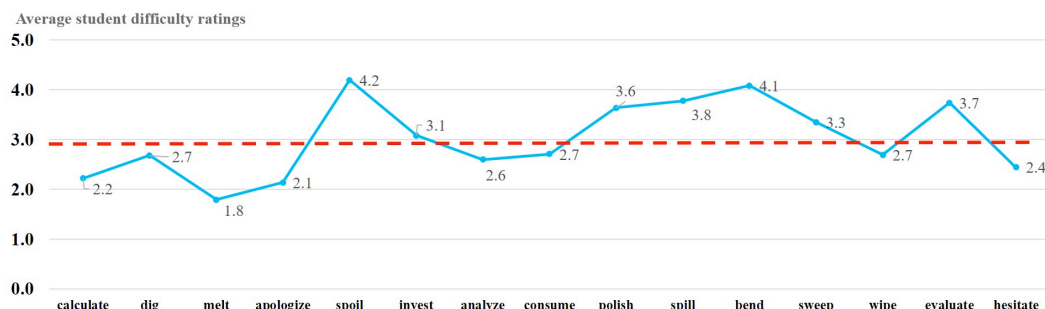


Figure 4: Average Student Difficulty Ratings of the Words in Level 3 (Rank 2001–3000)

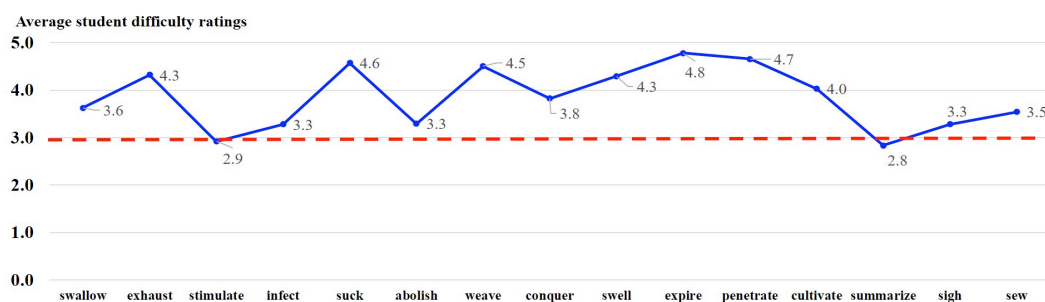


Figure 5: Average Student Difficulty Ratings of the Words in Level 4 (Rank 3001–4000)

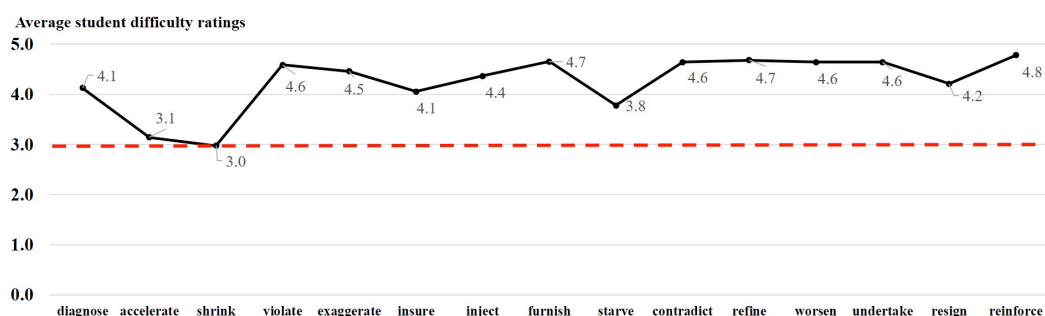


Figure 6: Average Student Difficulty Ratings of the Words in Level 5 (Rank 4001–5000)

The ratings tended to increase roughly in conjunction with how the words ranked on the New JACET8000. Specifically, the largest increase in the perceived difficulty occurred between Levels 3 and 4 (Figures 4 and 5, respectively). There was also some increase between Levels 2 and 3 (Figures 3 and 4, respectively).

Next, to determine which words should be targeted in English-speaking practice, we calculated the number of words in each level with an average difficulty rating higher than 3.

As shown in Table 2, the number of words in Levels 1 and 2 were two and three, respectively. There was a marked increase in the number of words in Level 3, which was seven. Furthermore, the number of words increased again to 13 and 14 in Levels 4 and 5, respectively. This means that the most marked increase in the number of words with a difficulty ranking higher than 3 was between Levels 3 and 4, which corresponds with the average ratings in the respective levels detailed above.

Level	Number of words with an average difficulty rating higher than 3
Level 1	2
Level 2	3
Level 3	7
Level 4	13
Level 5	14

Table 2: Number of Words Perceived as Most Difficult Per Level (15 Words Per Level)

Taken together, these results indicate that most students consider it difficult to translate the words from Levels 4 and 5 into English. Some students also considered it difficult to translate Level 3 words into English. These results suggest that English-speaking practices for the students in this study should target words from Levels 4 and 5. The words in Level 3 received more varied difficulty ratings from students, a phenomenon which is analyzed in more detail in the results for RQ2.

RQ2: For which levels of word difficulty do the difficulty ratings provided by students have the greatest response variance?

To answer this question, we calculated the standard deviation (SD) scores of the difficulty ratings in the words of each difficulty level. The number of words for which the SD scores were 1.0 or higher are shown in Table 3.

Level	Number of words with an SD score of 1.0 or higher
Level 1	12
Level 2	13
Level 3	15
Level 4	11
Level 5	6

Table 3: Response Variance in Difficulty Ratings

These results demonstrate a relatively large number of words for which the SD scores were 1.0 or higher in Levels 1 and 2. Even more pronounced was the response variance in difficulty ratings for Level 3 words, all of which had SD scores of 1.0 or higher. This variance is less pronounced in Levels 4 and 5. Based on these results, we recommend determining whether Level 3 words should be targeted based on the needs of the individual student.

RQ3: Which words do students consider most difficult?

Based on the findings for RQ1, we investigated which Level 4- and Level 5-words were most frequently considered difficult. To provide a rough indication, we determined which words were evaluated as being either “difficult” or “relatively difficult” by more than 80% of students as an indicator. We assessed these words further by calculating their average difficulty and the SD scores of these ratings (Table 4). As Table 4 shows, seven words in Level 4 and ten words in Level 5 were evaluated as difficult or relatively difficult by more than 80% of students. This criterion was met by all the words for which the difficulty ratings had SD scores lower than 1.0. These results suggest that words for which the SD scores were lower than 1.0 should be considered difficult words. They also suggest that an SD score of 1.0 in difficulty scores could be an indicator for determining what words are difficult for students.

Level	Word	The percentage of students who evaluated it as difficult or relatively difficult	The average value of the difficulty ratings	The SD score of the difficulty ratings
Level 4	exhaust	84.7	4.3	1.0
	suck	90.3	4.6	0.9
	weave	90.3	4.5	0.8
	swell	83.3	4.3	1.1
	expire	95.8	4.8	0.7
	penetrate	91.7	4.7	0.8
	cultivate	80.6	4.0	1.2
Level 5	violate	91.7	4.6	0.8
	exaggerate	88.9	4.5	0.8
	inject	86.1	4.4	1.3
	furnish	88.9	4.7	0.9
	contradict	94.4	4.6	0.8
	refine	95.8	4.7	0.8
	worsen	97.2	4.6	0.6
	undertake	94.4	4.6	0.7
	resign	87.5	4.2	0.99
	reinforce	98.6	4.8	0.5

Table 4: Level 4- and Level 5-Words Considered Difficult or Relatively Difficult

RQ4: Could a subjective difficulty rating of English words help further develop our system of English-speaking practice in a way that aids learners’ use of certain vocabulary?

This study used a subjective difficulty rating with a five-point Likert scale to analyze the difficulty levels of certain words. The results suggest that average subjective difficulty ratings can be used as a rough index of the ideal vocabulary level for learners to target. Moreover, the SD scores of the difficulty ratings could help determine whether a specific word should be selected for all students or only some students. Though a subjective difficulty rating is not an objective vocabulary test, it allows us to observe how students truly feel about the difficulty of using certain words. This differs from a paper-based vocabulary test, in which it is difficult to assess students’ feelings about word difficulty when they give correct answers. Although future studies are needed, subjective difficulty ratings can determine the best

vocabulary words for learners to practice on an individual basis, thus improving their learning situations. Our system aims to support learners by providing them with information to the extent to which they can use words and phrases. Students' subjective difficulty ratings should play a role in selecting the words used in English-speaking practices, based on the individual learner.

Limitations and Recommendations

The current study has certain limitations. It was conducted with a small group of students, and the feedback questionnaire investigated only 75 English verbs. More studies are needed to target a larger number of students and words. Additionally, it is possible that the perceived difficulty of using some words could change after students practice them, while other words may never become easier to use, even after practice. By conducting pre- and post-practice questionnaires, it is possible that the detailed changes in the perceived difficulty of each word after practice could be observed. We hope to investigate this in subsequent studies.

Conclusions

This preliminary study for developing a system for English-speaking practices investigated the role of a subjective difficulty rating through a questionnaire, using the vocabulary list "the New JACET8000." We conducted a self-reflective feedback questionnaire among 72 Japanese university students on the difficulty level of 75 English verbs, drawn from five different difficulty levels.

The results suggest that: (1) the words in Levels 4 and higher should be targeted in student practice; (2) Level 3 words should be selected for practice based upon the individual student; (3) all Level 4- and Level 5-words for which the SD scores in response variance were lower than 1.0 should be considered difficult words; and (4) individual students' subjective difficulty ratings should play a role when selecting their target words in the English-speaking practice system.

This is a continuous study, for which we aim to target more students and words in the future, to investigate these issues further. We also hope to assess how the detailed differences in the difficulty levels of individual words could change by conducting a questionnaire both before and after students practice using these words, and analyzing the results of the two questionnaires.

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Contact email: kasiwagi@kobe-u.ac.jp

Adaptation of COVID-19-related Loanwords into Japanese

Jeongsoo Lim, University of Tsukuba, Japan

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Abstract

In recent years, the quantity of loanwords adapted from foreign languages has increased as globalization advanced. Among this process, assimilation and extinction of the words are natural phenomena that have been observed in the past and the present. The changes produced by these processes sometimes cause communication gaps among people due to the lack of understanding. This study aims to shed light on how loanwords related to the COVID-19 pandemic have been adapted and used in comparison with the equivalent native lexicons in contemporary Japanese. In an attempt to achieve this research goal, firstly, COVID-19-related articles were collected from the *Mainichi* newspaper during the first wave of the pandemic. Secondly, loanwords were extracted by using morphological analysis. Lastly, the frequency of use of the selected loanwords and each loanword's changing tendency in comparison to the equivalent native Japanese words were analyzed. The findings show that COVID-19-related loanwords present distinct features in each word, and they can be divided into three groups: (1) loanwords that have consistent trend and frequent usage, (2) loanwords used in the same proportion as the equivalent native lexicons, and (3) loanwords that are replaced by native lexicons with time. These results contribute to understanding the process of loanwords adaptation in Japanese.

Keywords: Adaptation, COVID-19-Related Loanwords, Japanese, Equivalent Native Lexicons

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1. Introduction

The Japanese language is made up of three primary components. Native words (i.e. *wago*), Sino-Japanese words (i.e. *kango*) and loanwords (i.e. *gairaigo*) (Daulton, 2007; Irwin, 2011). Among these, loanwords that come from Western languages, have continually increased as globalization advanced and mutual relationship among nations developed. In general, English-based loanwords are more common than other loanwords from European languages (Miller, 1967). It is well known that loanwords make up approximately 10% of the Japanese language (Kunert, 2020), and that indicates the significance loanwords have in the Japanese lexicon.

When loanwords are integrated into Japanese, they typically undergo modifications, such as orthographical, phonological, morphological, semantic, and syntactic assimilations (Haugen, 1950; Kay, 1995; Loveday, 1996; Wawrzyniuk, 2017). After undergoing these systemic changes, they finally become part of the Japanese lexicon. Kay (1995) noted that English-based loanwords can easily be absorbed because of the existence of grammatical markers and Katakana characters in Japanese. The author especially highlights the fact that Katakana characters aid the assimilation of loanwords into the Japanese language system. Besides that, other studies focused on the assimilation of loanwords by comparing them with native words that have similar meanings (Kim, 2006a, 2006b; Kuya 2013). Kim (2006b) analyzed the word *kēsu* (case) considering its internal factors (i.e., the conditions under which the word can be used in a sentence) and pointed out that this loanword became a widely used word in Japanese. On a different approach, Kuya (2013) examined the same word *kēsu* considering the external factors (i.e., user's age and gender, educational background, etc.) and found out that the younger people use *kēsu* more than its equivalent native words in Japanese.

Loanwords adaptation into Japanese varies from word to word. Thus, incomplete assimilation of loanwords sometimes causes communication gaps among people (Jinnouchi, 2007; NINJAL, 2006, 2007). Jinnouchi (2007) points out that the older the person is, the lower their awareness of loanwords gets, and this causes communication gaps, a social problem beyond language and culture. In an attempt to minimize the problem of the unintelligibility of loanwords, the Japanese Ministry of Education, Culture, Sports, Science, and Technology has proposed near-equivalent native words to replace those loanwords (Kunert, 2020). Also, one of the traits of the loanwords is the fact that they keep continuously changing and that they change very fast. Considering this aspect, it is possible to assume that it is necessary to continuously identify newly adapted words.

Since 2020, COVID-19 has emerged in most countries, bringing a lot of international attention. Because of that, COVID-19-related words appeared and made a substantial impact on our languages (Ahmed and Islam, 2020; Mweri, 2021; Oxford English Dictionary, 2020; Roig–Marín, 2020). In this sense, COVID-19 and its effects on the Japanese language can be used as an example of the process of adaptation of relatively recent words into Japanese.

The purpose of this study is to investigate the process of adaptation of loanwords in Japanese particularly, through an analysis of COVID-19-related loanwords comparing them with the equivalent native lexicons. By doing this research, we can better understand how loanwords are integrated into Japanese and how we can cope with the deluge of new loanwords in the near future. In the next section, we describe the methodology used to achieve our research goals. In section 3, we classify the COVID-19-related loanwords based on the change of usage trend compared to the equivalent native lexicons. Lastly, in the final section, we

present the conclusions and discussions of this study. Throughout this paper, loanwords in Japanese will appear italicized, using the Hepburn romanization system, and English-based loanwords will be typically written in the Roman alphabet.

2. Methodology

As shown in Figure 1, the methodology of this research can be divided into four steps.

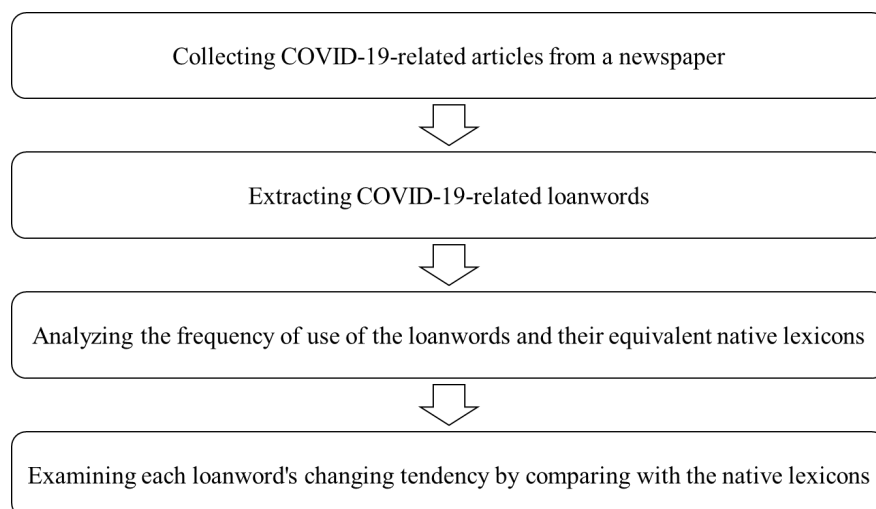


Figure 1: Research Procedures

Step 1: Collecting COVID-19-related articles from a newspaper

In the first step, we collected COVID-19-related articles from the *Mainichi Shinbun*, which is one of the national newspapers in Japan. Specifically, we gathered articles during the first wave of the pandemic, from January to May 2020, because the number of COVID-19 cases in Japan shows its first peak in the middle of April, as shown in Figure 2 (Ministry of Health, Labour and Welfare, 2020). We collected articles by keyword search, including *shingata haien* (a new type of pneumonia), *korona (wirusu)* (corona (virus)), and COVID. The total numbers of sentences extracted from news articles was 26,124.

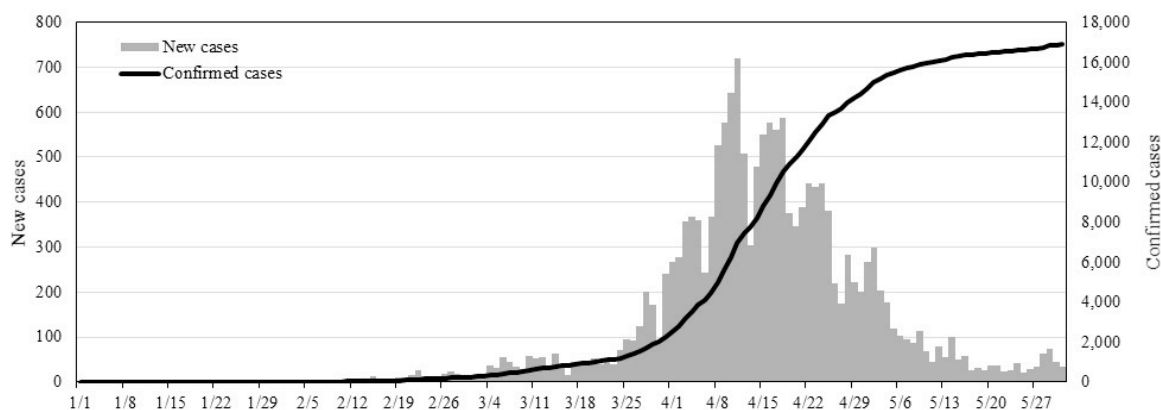


Figure 2: Number of COVID-19 cases in Japan (January ~ May 2020)

Step 2: Extracting COVID-19-related loanwords

In the second step, loanwords written in Katakana were extracted from the collected articles by using morphological analysis. However, loanwords that were already widely used, such as *wakuchin* (vaccine), *wirusu* (virus), etc. were excluded.

Step 3: Analyzing the frequency of use of the loanwords and their equivalent native lexicons

In the third step, we investigated the frequency of use of the selected loanwords and the native lexicons that have similar meanings in Japanese. The native lexicons include both Sino-Japanese words and the noun phrases that combine multiple Sino-Japanese words (e.g., *sekaiteki na dairyūkō* for pandemic, *kokibo na kanja shūdan* for cluster). Sino-Japanese words (*kango*) are distinguished from native words (*wago*). However, Sino-Japanese words were adopted much earlier than English-based loanwords and settled to Japanese. Thus, in this study, Sino-Japanese words are considered as native lexicons in a broad sense and selected as targets. Also, we only selected as targets for this study loanwords that, combined with their equivalent native words, were used more than 30 times in total.

Table 1 presents the rule for counting the frequency of loanwords and native lexicons. Loanwords used independently (without the Japanese translation in parentheses) (L1) and loanwords used with a Japanese translation in parentheses (L2) were counted as loanwords. Native lexicons accompanied by the equivalent loanword in parentheses (N1) and native lexicon used independently (N2) were counted as native lexicons.

Table 1: Rules for counting the frequency of loanwords and native lexicons

Classifications		Expressions in articles	Count	
			Loanwords	Native lexicons
Loanwords	L1	<i>rokkudaun</i>	1	0
	L2	<i>rokkudaun (toshi fūsa)</i>	1	0
Native lexicons	N1	<i>toshi fūsa (rokkudaun)</i>	0	1
	N2	<i>toshi fūsa</i>	0	1

Step 4: Examining each loanword's changing tendency by comparing with native lexicons

Lastly, we re-researched the native lexicons that appeared in parentheses because there is a possibility that those can be used independently. In addition, we also investigated each loanword's changing tendency by comparing the loanwords with their equivalent native lexicons.

3. Results

As for the frequency of use, we found a considerable number of COVID-19-related loanwords as given in Table 2. *kurasutā* (cluster) shows the highest frequency, and followed by *terewāku* (telework) and *pandemikku* (pandemic). There were also a variety of loanwords such as *posuto korona* (post-COVID-19), *sutei hōmu* (staying at home), *afutā korona* (after COVID-19), *autobureiku* (outbreak), *wizu korona* (with COVID-19), but, since they were used at a low frequency, they were eventually eliminated from the analysis. We only used loanwords that, combined with their equivalent native words, appeared more than 30 times in total, as mentioned earlier. More precisely, eight types, including remote work (i.e., the total number of different words) and 1,099 tokens (i.e., the total number of times the word

appears), were found in the newspapers. Table 3 shows these target loanwords and their equivalent native lexicons with frequencies from the newspaper.

Table 2: COVID-19-related loanwords and their frequencies from the newspaper

Loanwords in Japanese	Loanwords in English	Tokens
<i>kurasutā</i>	cluster	237
<i>terewāku (rimōtowāku)</i>	telework (remote work)	151
<i>pandemikku</i>	pandemic	92
<i>rokkudaun</i>	lockdown	63
<i>korona shokku</i>	coronavirus shock, shock of COVID-19	46
<i>ōbāshūto</i>	overshoot	27
<i>ekumo</i>	ECMO	26
<i>fēsu shiirudo</i>	face shield (mask)	18
<i>sōsharu disutansu (disutanshingu)</i>	social distancing	17
<i>sājikaru masuku</i>	surgical mask	14
<i>sāmogurafi</i>	thermography	13
<i>doraibu surū</i>	drive through	12
<i>fēsu gādo</i>	face guard	11
<i>posuto korona</i>	post-COVID-19	6
<i>infodemikku</i>	infodemic	5
<i>sāmokamera</i>	thermal camera	4
<i>sutei hōmu</i>	staying at home	3
<i>shiirudo masuku</i>	(face) shield mask	2
<i>afutā korona</i>	after COVID-19	2
<i>epidemikku</i>	epidemic	1
<i>korona pātii</i>	corona (virus) party, COVID party	1
<i>autobureiku</i>	outbreak	1
<i>nyūnōmaru</i>	new normal	1
<i>wizu korona</i>	with COVID-19	1
Total		773

Further, we also found out that each COVID-19-related loanword presents distinct features, and they can be classified into three main groups based on the relationship with native lexicons. The first group comprises only loanwords that were largely used from January to May 2020. The second group is characterized by loanwords used in the same proportion as the equivalent native lexicons. Finally, the third group is made up of loanwords that were replaced by a native lexicon with time. All loanwords in these groups are used only as nouns.

Figure 3 details the usage tendency of loanwords and native lexicons in group 1. The frequency in this figure shows the total of loanwords and native words. This group includes ‘pandemic’ and ‘corona shock.’ For this group, there is a clear trend of using mainly loanwords. A possible explanation for this is that there are no native lexicons to express the exact meaning of these loanwords. In the case of ‘pandemic,’ its alternative native lexicon *sekaiteki (na) dairyūkō* was used a few times, but ‘pandemic’ was dominant over the target period.

Table 3: Target loanwords and their native lexicons with frequencies from the newspaper

Loanwords		Native lexicons		Tokens
<i>kurasutā</i>	cluster	<i>shūdan kansen</i>	mass infections	169
		<i>kanja shūdan</i>	patients group	
		<i>kansensha no shūdan</i>	a group of infected patients	
		<i>kokibo na kanja shūdan</i>	a small group of patients	
<i>terewāku</i> (<i>rimōtowāku</i>)	telework (remote work)	<i>zaitaku kinmu</i>	working from home	167
<i>rokkudaun</i>	lockdown	<i>toshi no fūsa</i> <i>zendo fūsa</i>	closing of city nationwide lockdown	56
<i>ōbāshūto</i>	overshoot	<i>kansen bakuhatsu</i>	explosion of infection	55
		<i>bakuhatsuteki na kansen kakudai</i>	explosive spreading of infection	
		<i>bakuhatsuteki na kanja kyūzō</i>	sudden explosive increase of patients	
		<i>kansensha no bakuhatsuteki zōka</i>	explosive increase of infected people	
<i>sōsharu disutansu</i> (<i>disutanshingu</i>)	social distancing	<i>shakaiteki kyori</i>	social distancing	15
<i>shakaiteki kyori no kakuho</i>	keep social distancing			
<i>pandemikku</i>	pandemic	<i>sekaiteki (na) dairiyūkō</i>	worldwide epidemic	4
<i>korona shokku</i>	coronavirus shock, shock of COVID-19	—	—	0
Total				466

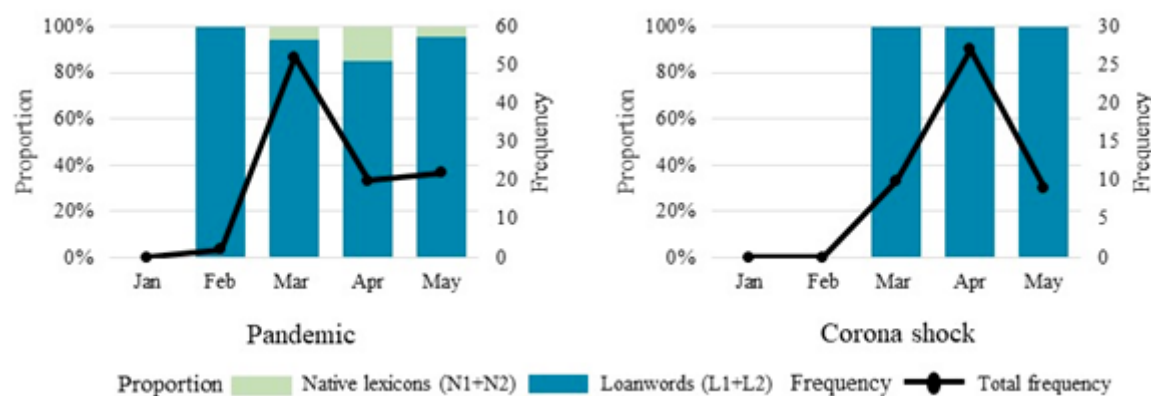


Figure 3: Usage trend of loanwords and native lexicons from group 1

In (1), (2), and (3), we present examples of sentences with the loanwords from group 1. In (1) and (3), these loanwords are used as L1 patterns in the newspapers. On the other hand, (2) shows the L2 pattern (native lexicon coming after the loanword ‘pandemic’). ‘pandemic’ means a disease that spread throughout the world, and ‘Corona shock’ is literally a shock that can cause the standstill of the global economy because of the spreading of the coronavirus.

- 1) *Tada, genjō-o pandemikku towa ninteishinakatta.* (March 1, p.3)
 However current situation-ACC pandemic-COMP recognized-NEG

‘However, (they) did not recognize the current situation as a pandemic.’

- 2) *Sekaijū-ga pandemikku (sekaiteki dairyūkō)-to kakutōshiteiru.* (March 25, p.6)
 Whole world-NOM pandemic worldwide epidemic-COMP
 is fighting

‘The entire world is fighting against the pandemic (worldwide epidemic).’

- 3) *Korona shokku-de kōkū gyōkai-no keshiki-wa ippenshita.* (April 27, p.2)
 Corona shock because of aviation industry-GEN landscape-TOP
 changed

‘The landscape of aviation industry rapidly changed because of the Coronavirus shock.’

Figure 4 shows the results for COVID-19-related words from group 2. This group includes ‘cluster’ and ‘telework (remote work).’ The former means ‘a group of cases of disease’, and the latter means ‘working from home.’ It can be seen from Figure 4 that both of them have in common the fact that the loanwords and the equivalent native lexicons are used in the same proportion. ‘cluster’ takes the higher proportion compared to its native lexicon, but native lexicons such as *kokibo na kanja shūdan* (a small group of patients), *shūdan kansen* (mass infections), *kansensha no shūdan* (a group of infected patients) were also used.

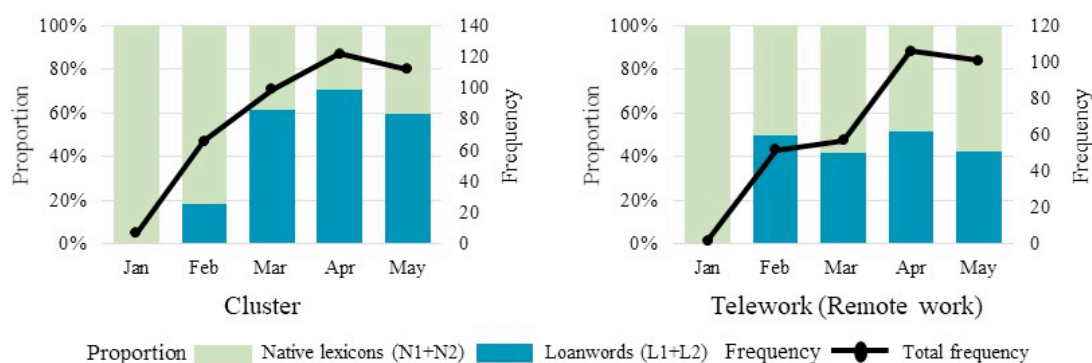


Figure 4: Usage trend of loanwords and native lexicons from group 2

Sentences (4) and (6) present examples of the L1 pattern whereas, (5) and (7) present the opposite pattern (N1 and N2, respectively), in which the native lexicon comes first. As mentioned before, there are several native lexicons that express the same meaning of ‘cluster,’ but in the examples below, we only present one of those lexicons *kokibo na kanja shūdan* (a small group of patients). On the contrary to this, only one native lexicon can be seen as a substitute for ‘telework (remote work),’ which is *zaitaku kinmu* (working from home).

- 4) *Futatsuno ōkina **kurautā-ga** Nagoya-ni dekita.* (April 16, p.24)
Two big cluster-NOM Nagoya-LOC occurred

‘Two big clusters occurred in Nagoya.’

- 5) *Tada, chiiki goto-ni **kokibo na kanja shūdan (kurasuta)-ga** hanmeishita*
However region each-LOC small patients group cluster-NOM identify
baai-wa kyūen-o motomeru. (February 28, p.1)
case-TOP closing schools-ACC require

‘However, closing schools is required when a small group of patients is identified in each region.’

- 6) *Kōjō ya inshokuten nado dōshitemo **terewāku***
Factories and restaurants etc. no matter what telework
dekinai gyōmu mo aru tameda. (May 26, p.7)
cannot business also there is because

‘Because there are some business in which telework is not possible such as factories and restaurants etc.’

- 7) *Ōte kigyō nado-de **zaitaku kinmu-ga** hirogari,*
Large companies etc.-LOC at home working-NOM spread,
nomikai-o jishukusuru ugoki-ga deteirinoda. (February 27, p.7)
drinking-ACC self-restraint movement-NOM is occurring

‘Working from home has become more widespread among large companies and a movement of self-restraint of drinking after work is occurring.’

The usage trend of COVID-19-related words from group 3 is presented in Figure 5. This group includes ‘social distance (distancing), ‘lockdown’ and ‘overshoot.’ It is apparent that loanwords have been replaced with native lexicons with time. Regardless of the total frequency, the decreasing tendency of loanword proportion is consistent. It indicates that loanwords have been substituted by native lexicons, such as *shakaiteki kyori* (social distancing), *toshi no fūsa* (closing of city), and *kansen bakuhatsu* (explosion of infection). ‘social distancing (distance)’ means the physical space between people to minimize the spread of the virus. ‘lockdown’ is a measure that restricts individuals from going outside in an attempt to control the spreading of the disease. ‘overshoot’ means an explosion of the number of infected people. In March and April, the pattern that uses loanwords at the front is seen as in the examples in (8), (10), and (12). In contrast, the other pattern, which uses native lexicons at the front, gradually increased as time passed, as exemplified in (9), (11), and (13).

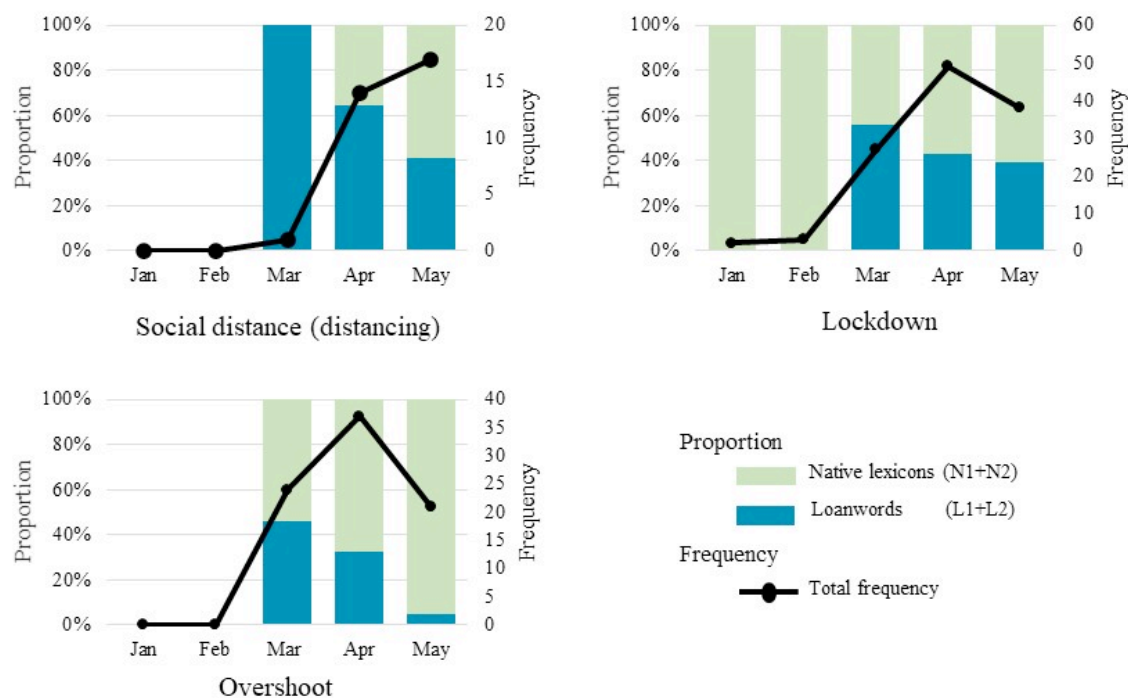


Figure 5: Usage trend of loanwords and native lexicons from group 3

- 8) *Ion-wa yōka, kyaku-ga reji-no mae-de itteino kyori*
 Aeon-TOP the 8th customers-NOM register-GEN front-LOC a certain distance
 “sōsharu disutansu (shakaiteki kyori)”-o totte naraberuyō, ichibu tenpo-no
 social distancing (social distance)-ACC keep get in line some stores-GEN
yuka-ni mejirushi-no teepu-o hatta. (April 9, p.25)
 floor-LOC sign-GEN tape-ACC attached

‘On the 8th, Aeon attached a marker tape on the floor of some stores so that customers could keep a certain distance (“social distancing”) while lining in front of the cash register.’

- 9) *Shikashi jinkō 2 oku 1000 mannin no uchi 1300 mannin-wa*
 But population 210 million people among 13 million people-TOP
hinkon chiku-ni sumi, shakaiteki kyori-ga torenai. (May 26, p.7)
 poor areas-LOC live social distancing-OBJ keep-NEG

‘But, 13 million people out of the 210 million population live in poor areas and cannot keep social distancing.’

- 10) *Somosomo Nihon-no genzai-no hō seido dewa rokkudaun (toshi fūsa)-no*
 Originally Japan-GEN present-GEN legal system in lockdown city closing-GEN
shikumi-ga nai. (April 10, p.17)
 system-NOM there be-NEG

‘Originally, there is not lockdown (city closing) system in Japan's current legal system.’

- 11) *Abe Sinzō shushō-wa muika, shushō kantei-de kishadan-ni*
 Abe Sinzō prime minister-TOP the 6th Minister's Office-LOC reporters-DAT
 “*kaigai noyōna toshi-no fūsa (rokkudaun)-wa sinai.* (April 7, p.1)
 overseas like city-GEN closing lockdown-TOP do-NEG

‘Prime Minister Shinzo Abe told reporters at the Prime Minister's Office on the 6th, “We will not close cities (lockdown) like people overseas did.’

- 12) *Kōshita jōkyō kara ishi ya senmonka kara ōbāshūto*
 Like this circumstances from doctors and experts from overshoot
 (*bakuhatsuteki na kansen kakudai)-o kenensuru koe-ga*
 explosive infection spreading-ACC worry voice-NOM
tsuyomatteimashita. (April 8, p.6)
 increased

‘Under these circumstances, the concerns of doctors and experts about overshoots (explosive spreading of infection) increased.’

- 13) *Kansen bakuhatsu-ga susumi, Chūgoku seifu-wa 1 gatsu 23 nichi-ni*
 Infection explosion-NOM increased China government-TOP January 23th-LOC
Bukan-o fūsashita. (May 4, p.10)
 Wuhan-ACC locked

‘As the explosion of infection increased, the Chinese government imposed a lockdown in Wuhan on 23rd January.’

4. Discussions & Conclusions

In the present study, we examined how COVID-19-related loanwords have been incorporated into the Japanese language. Firstly, we found that a considerable number of COVID-19-related loanwords were used in a span of five months. Some loanwords were accepted and used since there is no other way to express the same meaning more clearly using native lexicons, and some loanwords were used in spite of the fact that there were already interchangeable native lexicons.

The usage trend of loanwords varied depending on the word even though a number of loanwords were adopted due to the spread of COVID-19. Based on the comparison between loanwords and their equivalent native lexicons, loanwords were divided into three groups: The first one is the group that shows the trend of mainly using loanwords. The second one is the group in which the loanwords and their equivalent native lexicons are used in the same proportion. The third one is the group that shows the opposite trend of the first group, which is loanwords being replaced with their equivalent native lexicons. Focusing on loanwords included in the last group, we found out that they were considered to be unfamiliar and difficult to use by Japanese speakers, and their usage became an issue. According to the “Bōeishō,” (2020) and Yamashita (2020) websites, these loanwords should be replaced by Japanese native lexicons because they are not generic terms. From the result of the last group, it seems that this public issue may affect the frequency of use of the loanwords. The results of this study indicate that the external environments, for example, social issues or public opinion, have a big impact on the incorporation of loanwords.

Loanwords related to COVID-19 are only used as nouns because they are still in the early stage of adaptation. A majority of loanwords in Japanese are nouns (Loveday, 1996) since it is easier to adapt nouns than other parts-of-speech (Daulton, 2007). However, there are verbs related to COVID-19 in English. For example, the expression '(to) socially distance' is a verb made up from the expression 'social distancing' (Collins; Merriam-Webster). Investigating the trend of loanwords, including parts-of-speech, can help to clarify the adaptation system.

This study contributes to understanding the process of loanwords adaptation in Japanese. In future researches, we plan to examine COVID-19-related loanwords during the second and third waves in Japan and then compare the first wave, the second wave, and the third wave to verify whether there are differences or not. We also plan to investigate COVID-19-related loanwords in Korean, which has many common grammatical features with Japanese and compare the differences in adaptation of the loanwords between the two languages (Japanese and Korean).

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If You Know What I Mean: Rendering the Causative in Japanese and Croatian

Petra Jaklin, University of Tsukuba, Japan

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Abstract

Japanese causative sentences can oftentimes be ambiguous in their meaning. This especially applies to the *saseru* causative verb form which can be used to convey coercion and permission, amongst other meanings. This research focuses on a survey conducted amongst learners and former learners of Japanese who are native speakers of Croatian, and explores how example *saseru* and *temorau* sentences are translated into Croatian, i.e. how their meaning is expressed in a language that is so vastly different from Japanese. The survey also touches upon the rendition of Croatian sentences into Japanese, and analyses the expressions used by the participants of the survey to express the Japanese causative meaning in Croatian (and *vice versa*). The survey shows the variety of language expressions used in order to transfer a sentence that has a fixed form in Japanese, and what nuances are carried by the individual expressions.

Keywords: Causative, Japanese, Croatian, Survey

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Introduction

Japanese causative morphology, (i.e. the *saseru* causative suffix, and consequently the Japanese causative verb form) can be an obstacle in understanding the meaning of Japanese causative sentences due to its ambiguous nature – the same verb form can be used to express a variety of meanings, the most common being coercion and permission (Fukada, 2010; Kuroda, 1965; Santorini & Heycock, 1988). In English, for example, sentence meaning is unambiguous because coercion can be expressed through the usage of the auxiliary such as ‘make’ (ex. I made my brother fix the fence.) and ‘let’ (ex. I let my sister braid my hair.) (see (Santorini & Heycock, 1988)). Croatian functions in much the same way as English; it does not rely on causative morphology in order to express causation, so a variety of expressions can be used in order to render the causative meaning¹ (Sinčić, 2018; also Glumac, 2015; Kapić, 2020). The problem that arises is the following: as Fukada (2010) discusses, Japanese *saseru* sentences can carry different meanings, so at times there exists an uncertainty regarding the meaning a sentence is used to express. Consequently, how is such a sentence transferred into another language, especially one that uses different grammatical methods to express the same concept?

In general, a causative sentence carries the meaning of somebody of a higher status (causer) either making somebody else of a lower status (causee) perform an action that the causer instigated, or exerting influence over the causee (mental, emotional) (Mauriello, 2017). Causation in Japanese is commonly expressed through the causative verbal form (*saseru* causative verb – *ikasaseru*). This research focuses on the most common way of expressing causation in Japanese, the *saseru* causative sentences, and touches upon sentences employing the *temorau* benefactive construction. Although lexical causation is also one of the ways of expressing causative meaning in Japanese and other languages, it is out of scope of this research. Most commonly, the causative sentence is associated with the coercive meaning (in which the causee does not want to carry out the action) or permissive (in which case the causee is willing to perform the action) (Fukada, 2010:28-29). When talking about coercion, *temorau* sentences can also be used to express coercive meaning, similar to that of *saseru* coercive sentences (Mauriello, 2017; Wu, 2020; 李仙花, 2001). However, in the case of *temorau* coercive sentences, their causer is not necessarily of a higher status than their causee, and expresses milder, “polite coercion” as noted by Mauriello (2017:104). An example of coercive meaning expressed by *saseru* and *temorau* sentences is as follows:

Example

- 1) 母が子どもに部屋を掃除させる。(coercion)

*Haha ga kodomo ni heya o sōji saseru*².

- 2) 母は子どもに部屋を掃除してもらおう。(milder coercion)

Haha wa kodomo ni heya o sōji shitemorau.

The Mum makes the child clean the (their) room.

¹ The factitive is also discussed when talking about causation (Kapić, 2020; Sinčić, 2018).

² Hepburn romanization style is used throughout this paper.

Although the meaning expressed is the same, the nuance in each sentence is different – sentence 1a) is considered more forceful than sentence 1b).

As mentioned above, previous research has already discussed the ambiguity of Japanese *saseru* sentences and the possible meanings they can be used to express, which connects to the aim of this research – how are Japanese causative sentences transferred into another language (in this case Croatian) ?

Unlike Japanese, Croatian uses a variety of means to express causation, since it has no predominant verbal form associated with the causative meaning. Although causative morphology does exist, it is limited, and causation is predominantly expressed lexically or through periphrastic phrases. Since Croatian does not have a causative verbal form in the sense of the Japanese *saseru* causative verbal form, a coercive sentence such as

Example 2

- 1) 先生が子どもに作文を書かせる。

Sensei ga kodomo ni sakubun o kakaseru.

The teacher makes the children write an essay.

can be rendered into Croatian as both:

- 1) Učitelj tjera djecu da pišu sastav. (make+write) coercive

The teacher makes the children write an essay.

- 2) Učitelj dopušta djeci da pišu sastav. (let/allow+write) permissive

The teacher lets the children write an essay.

The reason why both interpretations are acceptable is due to the fixedness of the causative form and its ambiguity; although the sentence is coercive, that is known to the author of the sentence, but not necessarily to the reader, making both interpretations viable. Since interpretations may vary, a single causative sentence can be expressed in different ways in Croatian thanks to the variety of linguistic means available.

Literature on the causative tends to firstly introduce it as coercive, so if a non-native Japanese speaker were to associate the *saseru* causative sentence with the meaning of coercion, this could be considered logical. However, whether that is so, and in which way that meaning is transferred into Croatian is a question that this survey aims to clarify. This research aims to highlight which linguistic methods were preferred by the participants of the survey for the expression of causative sentence meaning, and discusses the meaning of expressions used. Although the main focus is on Japanese example sentences and their Croatian translations, Croatian example sentences and their Japanese translations will also be briefly mentioned. Furthermore, through this survey the difference in the nuance of coercion between *saseru* and *temorau* sentences is tested to see whether there is any difference in expression between the two forms.

1. The Survey

The survey this research is based on is an online survey conducted amongst native Croatian speakers who are either currently studying Japanese or have experience studying the Japanese language (i.e. former students) from two universities in Croatia. The survey was conducted from late December 2020 to mid-January 2021, and had a total of 34 survey participants, ranging from 1st year undergraduate students to master's course students, and students who have completed their Japanese course; 16 participants had experience studying Japanese before enrolling into university/their Japanese course, while 18 participants had no prior Japanese language learning experience. Most participants have not taken an Japanese proficiency exam (JLPT - Japanese-Language Proficiency Test; 6 participants have sat the exam), but the majority of participants (15 participants) judged their Japanese language proficiency level as B1 (Independent user - according to the CEFR³ language proficiency scale).

The survey consisted of 14 example sentences that the participants were asked to translate into Croatian (9 sentences) and Japanese (5 sentences). The survey also included questions about the participants' Japanese language study experience and their proficiency level, as well as some general questions about the Japanese causative and their opinion/understanding of it.

2. Results

The example sentences in the survey are summarised in Table 1 below:

No.	Example sentence	English translation
1	彼女が彼氏に箱を運ばせた。 <i>Kanojo ga kareshi ni hako wo hakobaseta.</i>	The girl had the/her boyfriend carry the box.
2	私は犬を公園につれて行き、走らせた。 <i>Watashi wa inu o kōen ni tsurete iki, hashiraseta.</i>	I took the dog to the park and let him run.
3	父は洗車場(せんしゃじょう)で車を洗車(せんしゃ)させた。 <i>Chichi wa senshajō de kuruma o sensha saseta.</i>	Dad had his/the car washed at the car wash.
4	おいしそうな缶詰(かんづめ)を買って、ねこに食べさせる。 <i>Oishisōna kanzume o katte, neko ni tabe saseru.</i>	I bought a can of food that looked good, and I fed it to the cat.
5	春の暖(あたたか)さが桜を咲かせます。 <i>Haru no atatakasa ga sakura o sakasemasu.</i>	The spring warmth makes the sakura bloom.
6	妹の声がきれいだから、私の好きな	My younger sister has a lovely voice

³ Council of Europe Common European Framework of Reference for Languages (CEFR): <https://www.coe.int/en/web/common-european-framework-reference-languages/level-descriptions>

	歌を少し歌ってもらった。 <i>Imōto no koe ga kirei dakara, watashi no sukina uta o sukoshi utatte moratta.</i>	so I asked her to sing me a song that I like for a bit.
7	弟は手をケガしているから、私がお昼ご飯を食べさせている。 <i>Otōto wa te o kega shite iru kara, watashi ga ohiru o tabesaseteiru.</i>	My younger brother injured his hand so I'm helping him eat/feeding him lunch.
8	兄に自転車の修理(しゅうり)をしてもらった。 <i>Ani ni jitensha no shuuri o shite moratta.</i>	I asked my brother to fix my/the bike for me.
9	スカートは長すぎるから、短くしてもらった。 <i>Sukāto wa nagasugiru kara, mijikaku shite moratta.</i>	The skirt was too long so I had it shortened.
10	Mama <u>me</u> je poslala u trgovinu po mlijeko.	Mum sent me to the store to get milk.
11	<u>Dala sam</u> psa na šišanje.	I had my dog groomed.
12	Baka <u>me</u> natjerala da pojedem još jednu sarmu. (<i>sarma</i> are cabbage rolls, a traditional Croatian winter dish)	Grandma made me eat another sarma.
13	Prijatelji <u>su me</u> iznenadili za rođendan.	Friends surprised me on my birthday.
14	<u>Rastužila sam</u> prijateljicu jer joj nisam došla na rođendan.	I made my friend sad because I didn't attend her birthday (party).

Table 1: Example Sentences in the Survey

The example sentences in Table 1 were constructed by the author of the survey and were constructed with different causative uses in mind (coercion, permission, manipulation, internal/emotional influence) employing both animate and inanimate causers and causees⁴. During the analysis of results, a sentence which is deemed 'incomprehensible', has a major grammatical mistake pertaining to the causative verb form (wrong verb selection and/or a mistake in the verb form), or the role of the causer/causee, was counted as a mistake (i.e. the role of the causer and causee are reversed, the causer is performing an action when that was not meant by the original sentence). Smaller, stylistic mistakes were not taken into consideration (e.g. in one of the responses, *hako*=box was translated as a "package", or if there were a mistake in the tense but not the verb/causative form itself) since they do not affect the expression used to rely the overall causative meaning of a sentence. Some participants gave more than one answer, and blanks (i.e. lack of response) were not counted as mistakes.

The participant's answers are summarised in Table 2 below, showing the most commonly used expressions for each example sentence.

⁴ The examples in the survey were chosen after conducting a pilot survey.

No.	Answers	Mistakes
1	causee+{njoj/joj+verb}+object natjerati+(...)causee+{da+verb} causer+dati+{da+verb} [preputiti+{da+verb}, prenijeti za+causer, pomoći+joj+verb, etc.]	3
2	verb+gerund/verb/reflexive verb pustiti+(ga+){da+verb}, dati (mu)+{da+verb}	9 (two answers used the verb “walk” instead of “run”)
3	dati+inf./gerund/{da+(ga) verb}/reflexive verb causer+verb/gerund *causer+verb	3 (11* – causer performs the action)
4	dati+(causee)+{da+verb}, dati+causee, etc. nahrniti+causee	2
5	subject: sakura usage of “zbog”	1
6	zamoliti+{da+(mi+)verb} pa+mi+verb (other expressions)	/
7	ga+hraniti+object pomoći /praviti, etc.+verb	1
8	mi+verb dati+{da (+mi)+verb}	9
9	dati+infinitive zamoliti+{da+verb} *causer+ (si+)verb	1 (2* – the causer performs the action)
10	causative <i>saseru</i> form	22*
11	<i>temorau</i> form causative <i>saseru</i> form	12*
12	causative <i>saseru</i> form causative-passive form (<i>saserareru</i>)	9*
13	causative <i>saseru</i> form <i>tekureru</i> form	18*
14	causative <i>saseru</i> form <i>saseteshimau</i> form	11*

Table 2: Participants` Answers (Expressions Used 3 Times or More per Example Sentence)
*sentences with grammatical/stylistic mistakes and/or Japanese particle mistakes not pertaining to the causer/causee are not included

3. Discussion

In this section, the expressions used by the participants of the survey (Table 2) and their meanings will be discussed⁵.

Example 1. was originally constructed with coercive meaning in mind, and with a basic causative sentence structure ([causer+*ga*]+[causee+*ni*]+[object+*o*]+*saseru* verb), although it could be interpreted as permissive due to the aforementioned ambiguity of Japanese causative sentences (the same can be assumed for Ex.2.). In case of Ex.1., survey participants seemed to associate the *saseru* sentence with coercion, expressed in Croatian by the verb “*natjerati*”. In the case of the usage of “*natjerati*”, the causer (the girl) was making the boy (causee) carry the box, with “*natjerati*” marking (strong) coercion followed by the action verb (to carry) in the subordinate clause (*natjerala+da nosi*= (she)made/coerced+(him)to carry).

On the other hand, active sentences that do not carry an embedded meaning of coercion or permission, but describe the state of affairs were used as well. In these sentences the subject (causee) performs the action of carrying the box expressed by the action verb (to carry). However, in a number of these sentences the nuance of helping the girl and doing the action for her benefit was expressed by the personal pronoun “*njoj*” or its shortened form “*joj*”, the dative case of the word “girl” (*djevojka*= *djevojci*), the verb “*prepustiti*” (*prepustila je* = she let him (carry the box)), the expression “*za djevojku*”= for the girl, or a clarification was added by the survey participant in their answer. In all of these instances, “the boy” is the causee but it is also the subject of the sentence.

Lastly, the verb “*dati*” in combination with an action verb (ex.: *dala je+causer+da nosi* = (she) had him carry) was used as well. Although in Croatian the verb “*dati*” means “to give”, the meaning translated into English would be “she had him carry” rather than “she gave to him to carry”. The combination of the verb *dati* (*se*) and the infinitive was discussed by Žagar Szentesi (2011), according to which *dati*+infinitive was used with an unknown causee and indicates that the action is carried out by that unknown causee. In this case, although the verb “*dati*” is used in combination with another verb, it still points to the transfer of the action from the causer to the (known) causee (the verb “*dati*” was also mentioned by Kapić (2020)).

Overall, although Ex.1. was translated as a coercive sentence, other means of expression were seen in the participants’ answers in almost equal measure.

Example 2. can be as ambiguous in its meaning as Ex.1. but was originally constructed with the permissive meaning in mind. It was mostly translated as an active sentence using the verb “to run”, and verbs of a similar meaning (*trčati*, *potrčati*= to run, to start running, *istrčati se*, *rastrčati se*= to run to one’s heart content, to run a lot), and gerund (*trčanje*). These sentences were using the verbs “*odvesti*, *dovesti*, *izvesti*” in the main clause, meaning “to bring/to take” the dog to the park, illustrating a state of affairs, or giving the reason for the causative action (I took the dog to the park so he could run.). Two sentences used the verbs “*istrčati/rastrčati*” (to run a lot) to express the meaning of “to have/make run”. Rather than coercive, the meaning of the sentence read as the causee participating in the action.

Sentences expressing permission did so in two different ways – more commonly by the use of

⁵ In Table2 and the Discussion section, Croatian verbs will be presented in their infinitive form when discussing their meaning/properties, although in the survey answers they were used in different tenses and persons.

the verb “pustiti” (meaning “to let, to allow”) in combination with an action verb (“trčati”= to run or the reflexive “istrčati se”= to run a lot), or by using the verb “dati” in combination with the verb “trčati”.

No expressly coercive reading was observed.

When an unknown causee carries out the causative action, the “dati (se)+infinitive” combination (Žagar Szentesi, 2011) was expected to be used for Example 3. Although the verb “dati” was indeed used in combination with the infinitive (dati+oprati= have cleaned/washed), it was also used in a series of other combinations, such as with a gerund (dati na čišćenje=to have cleaned), or a verb (dati (...) da ga operu= have them clean it, dati da se opere=have cleaned). Some sentences do not use the verb “dati” but use the verbs “odvesti” meaning “to take” (such as “Dad took the car to the car wash”, which indicate that the Dad didn’t wash the car himself) and are therefore appropriate in this context.

Sentences in which the causer (Dad) is also the one performing the action were observed (11 sentences), such as “Dad went to the car wash and washed the car”. Such sentences, although grammatically correct, are not the ideal way of translating the Japanese example sentence since they do not indicate the transfer of the action to the unknown causee – i.e., they are technically mistakes. Ex. 3. does not mean that the Dad himself washed the car, since that would be expressed with an active sentence with a verb in the *masu* form.

Lastly, a passive, a permissive, and a sentence using “they” in the role of a causee were used as well.

Example 4. and Example 7. carry a similar meaning and employ the same causative verb: *tabesaseru* (食べさせる= to make/have/let eat). Example 7. is a manipulative causative sentence where the (human) causer not only brings about a causative action but due to the inability of the (human) causee to carry it out, the action is carried out by the causer (Fukada, 2010). Example 4. is similar to Ex. 7., except that the causee in Ex. 4. is an animal so it cannot be strictly classified as a manipulative sentence.

The meaning of Ex. 4. is that the cat is being fed, i.e. the causer gives food to the cat, but does not physically feed the animal as it is not indicated that the animal is in any way unable to feed itself (unlike the causee in Ex. 7.). In this case, the majority of sentences used the verb “dati” in different grammatical combinations, for example: “dati+verb”, “dati+causee+{da+verb}”, “dati+ ju (object)+causee”, etc., amongst others. The use of different expressions using the verb “dati” is appropriate since “dati” shows that the causer does not physically feed the causee (rather than “the cat is given food”) and it is logically concluded that the causee performs the action. Verbs meaning “to feed” (“nahriniti” and “hraniti”) were used in some sentences as well, although to a lesser degree; both verbs indicate that the cat is (being) fed, but it is not clear whether the cat performs the action by itself or not.

Example 5. employed an inanimate causer and causee, which is a somewhat less common occurrence in Japanese causative sentences. In Croatian sentences, the example sentence and the causative verb *sakasemasu* (咲かせます) were translated in a variety of ways and depending on the sentence structure and the placement of emphasis, the subject of the sentence was either “sakura” or “spring warmth”. In the case of the subject being “sakura”, the preposition “zbog” (because of, due to) was used in the majority of sentences giving a

reason for sakura`s bloom.

The first of the *temorau* sentences is the sentence in Example 6. which expresses mild coercion or persuasion, in which the causer wants their sister to sing them a song. The most commonly used verb in the participant`s answers is “zamoliti”= to ask, in combination with the unmarked, short form of the personal pronoun in the dative case “meni – mi”⁶= for me. The usage of “mi”, which is the singular form of the 1st person dative case, shows that the beneficiary of the action is the speaker. Some sentences did not use the personal pronoun “mi”, but simply “zamoliti+ verb”, while others used “mi” in combination with an action verb. The usage of the verb “zamoliti” gives the sentence the form of a request rather than a command; for example, the usage of the word “reći”= to say, to tell makes the sentence sound more coercive: “Sestra ima lijep glas pa sam joj rekla da mi malo otpjeva pjesmu koju volim./ My sister has a nice voice so I *told* her to sing me the song I like for a bit.“. One of the answers used the verb “tražiti”= to ask, which still makes the sentence a request, but is somewhat more forceful than the verb “zamoliti“. However, it might be more natural to use “tražiti” when talking to one`s sibling.

There were several other different expressions used, but none were observed to have been used in more than one answer.

Example 7. is an example of a manipulative sentence, with the causee not able to feed themselves so the causer has to carry out the action. In Croatian sentences, the most commonly used expressions used the verb “hraniti” (to feed) in different combinations (for example: hraniti+object, etc.) which, unlike the Ex.4 expressions using the verb “dati”, means that the causee “is being fed”, and does not imply that the causee is physically feeding himself.

Several sentences using the verbs “pomoći”=to help, and “praviti/spravljati/napraviti”= to make in different combinations, showing that the causer is helping or assisting the causee in the act of eating lunch by either (physically) helping them or helping them by making the food themselves. This manipulative example can also read such as the causer helping the causee do the causative action, in which the causer can be understood to take an active role in the caused event, making it sociative, assistive causation as discussed by Shibatani & Chung (2001). In this case, the abovementioned expressions of “helping” can be used.

The following Example 8. and Example 9. are both *temorau* sentence examples, one with a known causee and the other with a causee not mentioned.

The causee in Ex.8 is known (older brother) and is made/asked to perform an action for the causer/subject (“I”). Unlike in Ex.6, in Ex.8 no specific polite wording was observed, and the verb “zamoliti” was used only in one case. However, similar to Ex.6, the short form of the personal pronoun “meni”- “mi” was used once again, marking the speaker as the beneficiary of the action. “Mi” was most commonly used in combination with the action verb “popraviti” (to fix).

The verb “dati” was used as well, such as “dati+ {da(+mi)+verb}”= had [him] fix (for me). In one instance, a sentence using the verb “dati” signals that the brother had somebody else fix the bike, i.e. my brother had the bike fixed, which is not the most appropriate way of

⁶ About the dative in Croatian, see Stanojević & Geld (2008).

translating the example sentence because it could be understood as the brother being the initiator of the causative action.

Overall, no polite expressions were used in the case of Ex.8, but no implicit or explicit coercion was observed either. The reason why expressions such as “zamoliti” (to ask) were not used, although appropriate, could be that the causee is the causer’s close relative, so such expressions might have been deemed unnecessary.

The last Japanese example sentence is Example9., which does not have the causee explicitly expressed and, in accordance with what Žagar Szentesi (2011) discussed, the most common expression seen in this case was the “dati+infinitive” (dati+skratiti= have shortened). There were a few instances of the verb “zamoliti” being used, and two sentences were translated as though the causer themselves shortened the skirt, which is incorrect. However the participants’ answers predominantly implied that it was not the subject of the sentence who performed the causative action, but a third party. No overly polite or “mild” expressions were observed.

Lastly, Examples 10., 11., 12., 13. and 14. were Croatian sentences which were translated into Japanese. Unfortunately, as can be discerned from Table 2, there was a high number of mistakes in the participant’s answers, and therefore definitive claims cannot be made about how the Croatian example sentences were translated into Japanese. Although there was a higher number of mistakes and unanswered questions overall, both the *saseru* causative form and the *temorau* form were observed, as well as the causative-passive *saserareru* form, etc. in some cases⁷.

The example sentence with the least mistakes is Example 12., which is undeniably coercive (the meaning expressed by the use of the verb “natjerati is to make somebody do something against their will”, as defined by the Scholastic Dictionary of the Croatian Language (Školski rječnik hrvatskog jezika)). Most of the survey participants chose the *saseru* causative verb form (*tabesaseru*) in their translations, although there were a few examples using the causative-passive form (*tabesaserareru*) in which the causee is the main focus of the sentence, shifting the original perspective of the example.

Another example with a relatively low mistake ratio was Example 14., although in this case there were a number of mistakes made that were not related to the causative form *per se* but the sentence structure and the other verbs/words in the sentence. In this case the *saseru* form was predominant (*kanashimaseru*=to make somebody sad/to sadden).

Conclusion

The survey answers showed that amongst various ways a causative sentence meaning can be transferred into Croatian, coercive meaning is not necessarily the go-to default. Furthermore, although different expressions were used in regards to different example sentences, the participants’ answers also showed the versatility of expressions that include the verb “dati”, which was employed in the majority of answers concerning Japanese example sentences (although to different extents).

When it came to the difference in expression between the *temorau* and *saseru* sentences, no significant difference in expression was observed amongst the Croatian answers. *Temorau*

⁷ See {*} underneath Table 2.

examples used the “dati” verb as well, and the short form of the personal pronoun form - “mi”, in order to point to the beneficiary of the action.

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Online Resources/Dictionaries

Council of Europe Common European Framework of Reference for Languages (CEFR): <https://www.coe.int/en/web/common-european-framework-reference-languages/level-descriptions>

Scholastic Dictionary of Croatian Language (Školski rječnik hrvatskog jezika): <http://rjecnik.hr/>

Contact email: 5rajaklin@gmail.com

The Influence of Comma- and Period-pause Duration on the Listener's Impression of Speeches Made in Mandarin Chinese

Mingji Lin, Kyushu University, Japan
Yoshitaka Nakajima, Sound Corporation, Japan
Shimeng Liu, Kyushu University, Japan
Kazuo Ueda, Kyushu University, Japan
Gerard B. Remijn, Kyushu University, Japan

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Abstract

The influence of pause duration at commas and periods on listeners' impressions of speeches made in Mandarin Chinese was investigated. Spoken excerpts of speeches from textbooks were presented to native Chinese listeners (n=20). In the first experiment, the pause durations of both commas and periods in the speeches were manipulated together, in 8 steps from 0 - 4.8 s. The listeners were asked to rate the speeches on 23 categories on a rating scale, including categories regarding the tempo, quality, and continuity of the speeches. Factor analysis (based on principal component analysis) over the rating data showed that out of four extracted factors, two factors prominently appeared. These two factors were interpreted as reflecting *speech naturalness* and *speech rate*. The speech rate impressions increased as the comma- and period-pause durations decreased. The speech naturalness was the highest when the pause duration was 0.6 s. In a following experiment, comma- and period-pause durations were manipulated separately, varying from 0.15 - 2.4 s. Original speech and speech without pauses were included as control conditions. Factor analysis over the rating data (n=20) again showed *speech naturalness* and *speech rate* as the two main factors. Taken together, both experiments convincingly indicated that speeches with a comma-pause duration of 0.6 s, along with a period-pause duration of 0.6 s or 1.2 s, are heard as having the highest *speech naturalness*, i.e., close to that of the original speech. These findings may be incorporated in artificial speech, and may be useful when practicing the delivery of speeches.

Keywords: Speech Perception, Pause Duration, Mandarin Chinese

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1. Introduction

There are three types of temporal gaps in speech. These are voice onset time (VOT) within syllables, pauses or energy dips in the speech signal for word segmentation between words, and pauses for punctuation between clauses. Figure 1 shows each type of temporal gap. According to previous research, the three types of temporal gaps affect the perception of speech in different aspects. For example, VOT influences the perception of consonants in syllables, as evidenced from various studies on different languages and speakers (Lisker & Abramson, 1964; Li, 2013; Kang, 2014). Word segmentation research commonly pertains to the perception of stress patterns in speech and how this contributes to sentence parsing (Curtin, Mintz, & Christiansen, 2005). The most obvious temporal gaps in speech are pauses for punctuation.

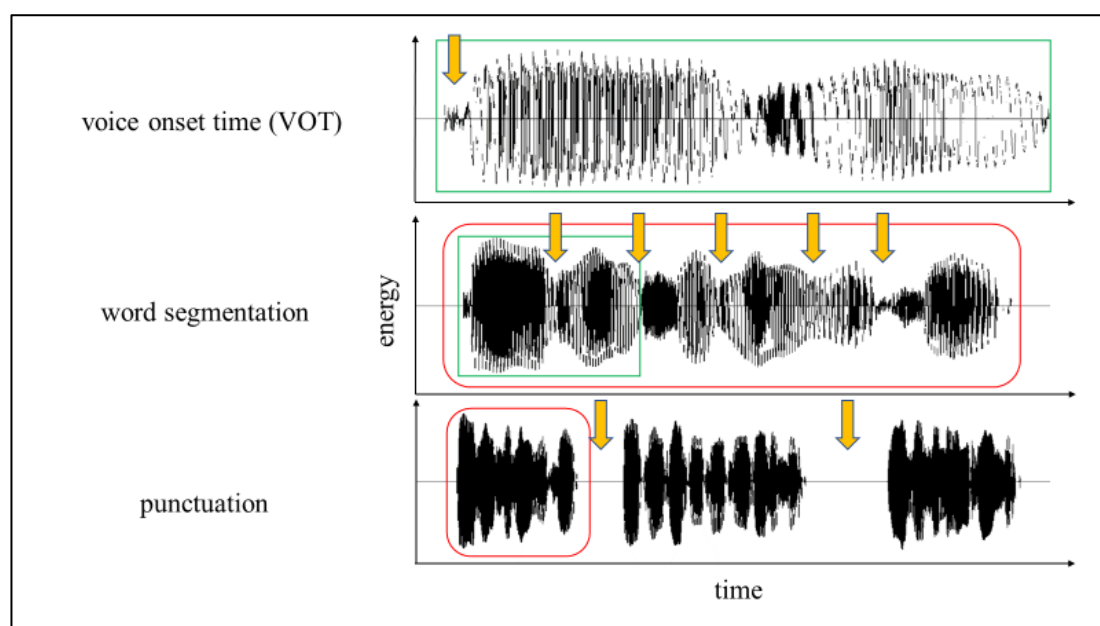


Figure 1. Examples of three types of temporal gaps in speech. Frames with the same color refer to the same part of the sentence with different resolutions, and the arrows indicate the exact places of each type of temporal gap.

Research about pause duration of punctuation marks in English speech, such as commas and periods, has been done for many years. The word *pausology* was firstly mentioned in 1965, referring to the use of pauses in speech and music (Tosi, 1965). Efforts have been made to identify hesitations and pause duration and their frequency of occurrence in speech in an automatic way (Horii, 1983). With regard to speech perception, previous research on pause duration has shown that different lengths of physical pause durations of American English and German can lead to an overestimating or underestimating of perceived pause durations (Stuckenberg & O’Connell, 1988). As for punctuations, though, little is known about which pause durations are most natural. A recent study used listeners’ judgements and principal component analysis to shed light on the matter. Liu and colleagues (2019) performed a series of listening experiments in which the length of comma- and period-pause duration was varied in short English sentences. Listeners were asked to judge the perception of the sentences on 23 items or 12 items, respectively, in two experiments by means of a rating scale (Liu, Nakajima, & Elliott, 2018; Liu et al., 2019). Following Principal Component Analysis, two main factors were extracted from the rating judgements. These were “speech naturalness” and “speech rate”, which we will refer to as the “Speech Rate factor” and the “Naturalness factor”

from here on. As for the Speech Rate factor, the obvious result was that if pause duration was longer, speech rate was perceived as slower. More importantly, as for the Naturalness factor, the most natural pause duration for English was the condition in which commas and periods were 0.6 s (600 milliseconds). That is, when both commas and periods were fixed at 0.6 s, speech naturalness was not significantly different from that of the original speech.

In the present study, we used the same research methods as in Liu et al. (2018; 2019) to investigate the naturalness of punctuation pause durations of commas and periods in Mandarin Chinese speech. The reason why we choose Chinese as target language was that there is no pausology research for languages that have a short history of using punctuation marks, like Mandarin Chinese. Punctuation marks in Chinese have been used for about only 100 years. Other than English, which has 13 kinds of punctuation marks, Chinese has 17 kinds of punctuation marks (Straus, Kaufman, & Stern, 2014; General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China & Standardization Administration [GAQSIQ & SA], 2011). Furthermore, Chinese is a tonal language, and English is a stress language. It is therefore likely that research findings on punctuation pauses and speech naturalness in English may not directly pertain to Chinese.

2. Methods

Two experiments were performed in order to identify the most natural comma- and period-pause duration for Mandarin Chinese. The results were compared with the previous research for English speech (Liu, Nakajima, & Elliott, 2018; Liu et al., 2019)

2.1 Participants

For each experiment there were 20 native-Mandarin-Chinese participants. They were 6 males and 14 females in Experiment 1, and 9 males and 11 females in Experiment 2. All participants were university students and had normal hearing. Before each experiment, all participants provided written, informed consent as to their participation. The experimental procedures were pre-approved by the Ethical Committee of Kyushu University, Fukuoka, Japan.

2.2 Apparatus

Experiments were completed in a soundproof booth with a background noise of 25.1 dB L_{AF} and 25.4 dB L_{AF} in Experiment 1 and Experiment 2, respectively. Speech stimuli were binaurally played to participants through a PC (Microsoft Surface 3 64GB, OS Windows 8.1), an amplifier (AT-HA40USB) and headphones (Roland RH-300).

2.3 Stimuli

The comma- and period-pause durations of Mandarin Chinese from HSK (Hanyu Shuiping Kaoshi) level 5 textbooks were varied together or separately in the two experiments. Speech samples were selected from 2 male speakers and 2 female speakers in Experiment 1, and from 1 male and 1 female speaker in Experiment 2. Comma- and period-pause duration in the sentences were presented in the following steps, as in Liu and colleagues (2018, 2019). In Experiment 1, the comma and period durations were: original speech, 0 s, 0.075 s, 0.15 s, 0.3 s, 0.6 s, 1.2 s, 2.4 s and 4.8 s. In Experiment 2, we used original speech, 0 s, 0.15 s, 0.3 s, 0.6 s, 1.2 s and 2.4 s. Since comma- and period-pause durations in Experiment 2 were varied

individually, we used fewer steps in Experiment 2, in order not to make the experiment too long.

2.4 Procedures

Participants controlled the stimulus presentation themselves through buttons on the screen. After they clicked a “Play” button, the speech stimuli were played automatically after 0.5 s. Each stimulus was presented only once, and the time for participants to rate was not limited. Participants were asked to rate the speech stimuli on 23 or 12 evaluation items, respectively, in Experiment 1 and 2. Ratings were made on a semantic differential scale from 1 to 10, with “1” meaning “not appropriate at all” and “10” meaning “very appropriate”. Evaluation items used in Experiment 1 were “rushed”, “natural”, “rough-timbred”, “skillful”, “speedy”, “at a suitable tempo”, “well-practiced”, “fast”, “with appropriate pause duration”, “friendly”, “high-pitched”, “with appropriate rhythm”, “smooth”, “nervous”, “experienced”, “shrill”, “fluent”, “easy to understand”, “elegant”, “intelligible”, “polite”, “dynamic”, and “clear-cut”. Evaluation items used in Experiment 2 were “rushed”, “natural”, “rough-timbred”, “skillful”, “speedy”, “at a suitable tempo”, “well-practiced”, “fast”, “with appropriate pause duration”, “friendly”, “high-pitched”, and “with appropriate rhythm”. All the research protocols and experimental designs were the same as used in the previous research on pause durations in English speech (Liu, Nakajima, & Elliott, 2018; Liu et al., 2019).

3. Results

The results were analyzed in the following steps. Firstly, we calculated the means of the rating scale judgments in order to see which of the evaluation items were influenced by the changes in the pause duration. Then we performed Principal Component Analysis to extract the main factors. Principal Component Analysis can “simplify” the results of the ratings by summarizing them into “factors”. Four factors were extracted in Experiment 1 (Table 1). These were “speech naturalness”, “speech rate”, “speech friendliness” and “tone height”. In Experiment 2 we obtained 3 factors. These were “speech naturalness”, “speech rate” and “else”. We found that two factors that were extracted in both experiments, were the same as for the previous research with English pause durations (Liu, Nakajima, & Elliott, 2018; Liu et al., 2019). These factors were the Speech Rate factor and the Naturalness factor.

Figure 2 shows the relationship between pause duration and the Naturalness factor and the Speech Rate factor obtained from the results of Experiment 1. As for the Speech Rate factor, indicated in red, when the pause duration got longer, the speed of the sentences was perceived to be globally slower, even though we just adjusted the pause duration and not the speech itself. The perceived speech rate thus can be influenced by pause duration itself. As for the Naturalness factor, indicated in green, the factor score of the original speech sentences (the green filled circle) was significantly higher ($p < 0.05$) than the factor scores of all the speech sentences in which the pause duration was varied. However, the factor scores of speech sentences with a fixed comma- and

	factors			
	1	2	3	4
at a suitable tempo	0.899	-0.003	0.132	0.026
with appropriate pause duration	0.897	-0.030	0.111	0.041
with appropriate rhythm	0.883	0.013	0.161	0.000
natural	0.805	0.127	0.343	0.000
well-practiced	0.747	0.413	0.288	0.076
experienced	0.737	0.345	0.352	0.115
intelligible	0.728	0.025	0.132	-0.089
easy to understand	0.720	0.064	0.187	-0.123
skillful	0.687	0.409	0.372	0.088
fluent	0.618	0.604	0.237	-0.032
smooth	0.615	0.578	0.280	-0.049
fast	-0.067	0.852	-0.125	0.205
rushed	-0.189	0.849	-0.180	0.140
speedy	0.281	0.821	0.052	-0.062
dynamic	0.378	0.609	0.192	-0.086
elegant	0.483	-0.056	0.682	0.075
clear-cut	0.222	0.139	0.669	0.119
rough-timbred	0.063	-0.106	-0.657	0.362
polite	0.469	-0.097	0.646	-0.152
friendly	0.483	-0.168	0.592	-0.181
nervous	-0.365	0.386	-0.438	-0.165
high-pitched	0.037	0.044	0.026	0.896
shrill	-0.075	0.090	-0.124	0.875

Table 1. The result of the Principal Component Analysis performed over the 23 evaluation

items used in Experiment 1, after varimax rotation. Factors 1-4 represent “speech naturalness”, “speech rate”, “speech friendliness” and “tone height”, respectively, from top to bottom delimited by thick black frames. The Speech Rate factor and the Naturalness factor were also among the 3 factors extracted from the results of Experiment 2 (not shown here).

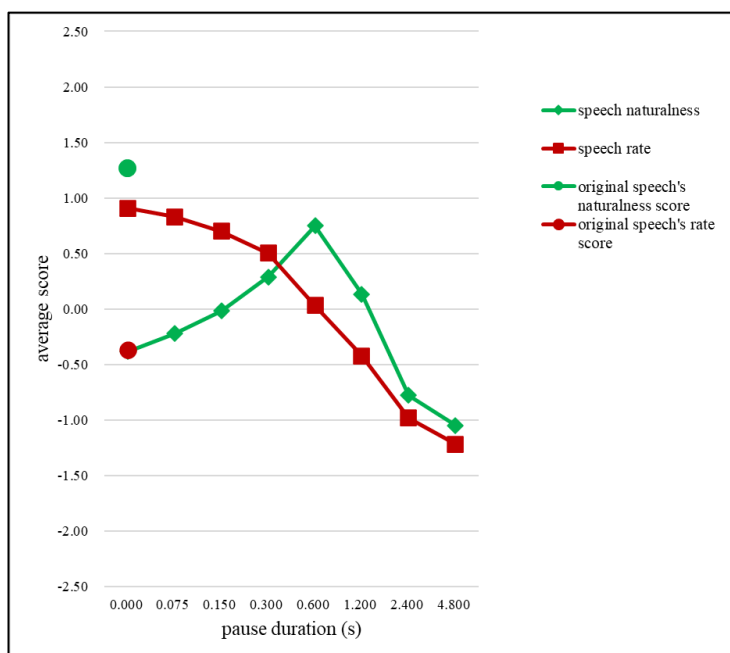


Figure 2. The relationship between pause duration and the Naturalness factor and the Speech rate factor in Experiment 1

Period-pause duration of 0.6 s were statistically significantly higher than that of any of the other manipulated speech sentences. Although significantly less natural than the original speech, Mandarin Chinese speech with a comma- and period-pause duration of 0.6 s was the most natural.

For Experiment 2, the same analysis method was used as in Experiment 1. As for the Speech Rate factor, similar to Experiment 1, when the pause duration got longer, the perceived speed of the sentences was perceived to be globally slower. Figure 3 shows the factor scores for the Naturalness factor obtained from the rating results of Experiment 2. The statistical analyses showed that the factor scores of speech sentences with a comma-pause duration of 0.6 s, and those with a period-pause duration of 0.6 s and a period-pause duration of 1.2 s were not significantly different from the original speech sentences. For the results of Experiment 2, we thus can conclude that the sentences with a comma duration of 0.6 s, and the period durations of 0.6 s and 1.2 s were perceived as having the same naturalness as the original speech, while the most natural speech was for a comma duration of 0.6 s, and a period duration of 0.6 s.

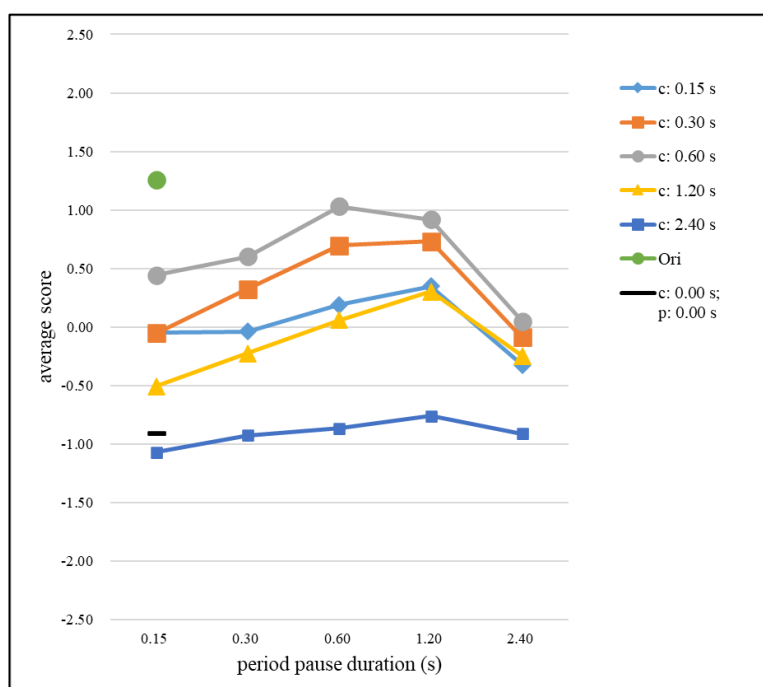


Figure 3. The relationship between pause duration and the speech Naturalness factor in Experiment 2. Letters “c” and “p” refer to the pause duration of commas and periods, respectively.

4. Conclusions

Comparing these results from Mandarin Chinese with previous research on English punctuation duration (Liu et al., 2019), we can find differences and similarities between the results obtained for the two languages. The main difference was that the average factor scores of the Naturalness factor for Chinese original sentences were higher than for English ones (0.82 in Experiment 2 for English, Liu et al., 2019; 1.27 in Experiment 1 and 1.25 in Experiment 2 in the present study with Mandarin Chinese). One reason for the higher factor scores for Chinese could be that the writing style of the speech stimuli used here was somewhat different. In the study with English sentences, public speeches were used (Liu, Nakajima, & Elliott, 2018; Liu et al., 2019), while in the present study announcements were

used. Another reason for the difference in factor scores could be that the speaking rates of the original speech stimuli used for each language were different. More experiments are required.

The similarities were very clear. Obviously, a longer pause duration resulted in a slower perceived speech rate. Most importantly, there is an optimum pause duration, which is 0.6 s, for both commas and periods, and for both English sentences (Liu, Nakajima, & Elliott, 2018; Liu et al., 2019) and in the present study with Mandarin Chinese. In the future, we wish to further study whether the speaking style (i.e., variations in speaking style to convey the purpose of the text), the participants' native language, or manipulating the duration of pauses at other punctuation marks affect the perceived speech rate and/or naturalness or not. Besides, it would be very fruitful to know whether the same results can be found for other languages as well. If so, our results can help to develop more suitable artificial speech technology (either speech generation or recognition). Using a constant pause duration may also be useful when practicing the delivery of speeches or lectures. The fact that to fix pause duration at 0.6 s makes the speech as natural as the original speech is practical for education.

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Contact email: Mingji Lin: vodkaddicter@gmail.com
Gerard B. Remijn: remijn@design.kyushu-u.ac.jp

Gamified Tools in the Development of Communicative Production in Remote EFL Learning

Lucila E. Quezada, Indoamérica University, Ecuador

Daniel P. Ripalda, Indoamérica University, Ecuador

Jessica P. Cuenca, Indoamérica University, Ecuador

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Abstract

One of the most critical challenges of Foreign Language teaching is developing students' oral communicative competences, enhancing productive skills, and expressing thoughts in another language. This teaching process requires using different resources to acquire cognitive experiences that promote meaningful learning. However, during the COVID-19 pandemic, teachers emphasized virtual learning environments (VLE) and other digital resources to achieve the expected learning outcomes. In this context, quasi-experimental research was developed over six months, which analyzed the effectiveness of learning oral communicative skills of English as a Foreign Language (EFL) through regular formative tests, according to international standards, prioritizing fluency, use of language, interaction, and pronunciation areas. This work involved specialist teachers in assessment development and teaching resources production; this study registered the progress of 107 first level students of the Language Centre at the Indoamérica University of Ecuador, the first one non-randomly group used external gamified resources, and the second one used the default activities of the LMS, during the teaching-learning process in the remote modality. The results of this work show a correlation between the use of gamified resources and the assimilation of some oral language skills; therefore, from this experience, it is recommended for teachers to incorporate these kinds of resources to improve this productive oral skill within the communicative standards of the Common European Framework for Teaching English.

Keywords: Digital Resources, Remote Learning, Gamification for Productive Oral Skill

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Introduction

The development of productive oral competence has always been the primary concern of EFL teachers since it is one of the skills that allow us to communicate immediately with our interlocutors. That is why this research aims to establish specific gamified resources to interact in the remote modality since the global pandemic we are going through has forced us to explore new tools to turn our class into the ideal space to develop and strengthen these skills.

The communicative skill (speaking) plays a significant role in conveying ideas with the right words correctly with proper pronunciation. Besides, explicitly three areas of knowledge are considered: language input with a diversity of activities that provide the learner with the resource he requires to start building his knowledge; the output structure refers to structured exercises and is a phase between presentation and practice (Setiyadi, 2020) and communicative output where the production phase is oriented. (Hamidova & Ganiyeva, 2020)

To improve these goals, the model was centered on the classroom and blended learning modality. All activities were carried out in the classroom, which the students attended regularly. The speaking practice was done in situ through voice recording due to the number of students, one-minute recording, role-playing, oral repetition, and rubrics to show each student's progress. With the COVID-19 pandemic, the pedagogical strategies had to be redefined because there was no physical contact with the students.

The pandemic situation led to a disruptive change and allowed digital technology to become the main ally of teachers and students to carry out different academic activities. Thus, the educational field went from face-to-face mode to remote mode to continue with their work. With this transition, both teachers and students had to adapt to a new way of studying even though students were mainly prepared for this shift, but some teachers felt unprepared to integrate digital teaching techniques in their curricula. The academic staff, especially mid and late-career teachers, had often incorporated technology use in their objectives to perform teleworking more effectively and incorporate digital resource. (van der Spoel, Noroozi, Schuurink, & van Ginkel, 2020).

That is why, in the search for incorporating digital resources, the foreign language teacher faced this question: How to develop the communicative competencies (speaking) of English as EFL through an LMS due to the pandemic? Several studies have highlighted the benefits of using this medium to develop speaking skills since they bring together aspects such as economy, privacy, simplicity, and flexibility (Irawan, 2020). Additionally, these resources allow diversification of strategies, models, and methodologies that meet the current context requirements (García, 2014)

Taking into account the literature review, in our work, we suggest the following objectives: to propose gamified tools that improve the assimilation of EFL by students when developing the skill (speaking) in the context of Covid-19 and to analyze the comparative results between the intervention and experimental groups concerning the use of gamified resources applied to the English language through remote learning.

Background

The leap of gamification as a virtual tool in the education field involves solving the problems of lack of concentration and motivation, study environment unsuitable for learning, emotional factors that hinder the execution of a specific task, which through a gamified system helps to overcome all these barriers, (Teixes, 2015). Its application in the classroom becomes innovative support to the current pedagogical methodologies to educate in the Knowledge Age, competencies, and skills of the curriculum, whose methods and design visualize a comprehensive education, where gamification plays a fundamental role.

“The classic vision of Gamification consists of the use of strategies, models, dynamics, mechanics, and game elements in non-game contexts, to convey a message or content or change behavior through a playful experience that promotes motivation, involvement, and fun, (...) (Llorens-Largo et al., 2016, pág. 1). Through gamified interactive resources, different activities can be carried out to effectively link the teacher and students within the teaching-learning process in a dynamic way to turn a virtual session into a space of interaction.

Additionally, through gamification, teachers can include activities such as formal study, observation, evaluation, reflection, practice, management, skills improvement, trial, and error or problem-solving activities can occur in an individual or group context and in a determined or undetermined time (Espinosa & Eguia, 2016). A gamifying process is an answer to a specific need in the class where the aim is to work on content by providing educational experiences.

For (Kapp, 2012) gamification is a teaching mechanism based on games that motivate students and promote their learning. Besides, gamified tools designed virtually are the gear that promotes thinking to positively attract and incite to solve the problems posed and is a teaching support tool for learning processes to be meaningful and successful.

According to, (Ključević & Krumes, 2020) talks about play in teaching, about the teacher's importance of finding the appropriate method to impart knowledge to the students according to their age. One of the ways to teach a foreign language is the game, the double action of "learning and playing at the same time" allows the acquisition of new knowledge and makes learning grammar and spelling less tedious and more attractive activities that are gamified, creating a positive atmosphere in the classroom and better learning performance.

Meanwhile, (Zichermann & Cunningham, 2011) suggest categorizing the elements of a game into three groups: mechanics, dynamics, and aesthetics. Mechanics refers to how games transform specific inputs into specific outputs, where it maintains a direct connection with the learning content and in educational contexts includes the application of challenges. Dynamics indicate the needs to be satisfied in the activity. These, together with the mechanics, interact during the game and the aesthetics. However, refer to how the mechanics and dynamics of the game interact with each other to produce emotional results. According to these categories, the teacher should consider the dynamics to apply concerning each group's needs and class objectives.

Gamification is a learning tool implemented as the mechanics of games in the educational field to achieve better results, such as: acquiring knowledge to develop some skill and reward specific actions. In English as a foreign language, technological tools can be used as part of

educational strategies for the effective development of speaking, based on the use of new technologies to raise the teaching practice and the student's knowledge to be more meaningful and functional. Enhancing the students' skills and, in turn, generating a greater motivation being the student more involved in their learning. (Moreira & González, 2015).

The existing literature on using gamified resources for English language teaching is not conclusive, although authors such as Moreira speak of having tested gamified resources, obtaining favorable results. Likewise, Camilo Corchuelo presents a study in which he uses gamified resources to motivate and dynamize the contents in the classroom and points out that he has achieved significant results.

However, given the global situation, it became evident that these technologies have not reached their full potential because they have not been thoroughly tested in remote learning modalities. Due to the pandemic, several studies are just beginning to be developed, considering that one of the main variables is that the teacher has limited contact with the students and can only use digital media to communicate, evaluate and execute the teaching process.

Another essential aspect to consider is that studies involving digital educational tools are rapidly losing relevance due to the dizzying advance of technology. Several of the resources that now exist were not available years ago, and those that were available were not used as regularly as they are now, mainly due to the technological gap, teacher's professionalization, connectivity, and infrastructure.

Background of the Study

The Language Institute at the Indoamérica University of Ecuador, due to the confinement policies established by the National Government to prevent the spread of COVID-19. In March 2020, all academic activities went to virtual mode; that is, the interaction of teachers and students in physical spaces was eliminated, moving to a remote learning model that forced all academic community members to use the technological resources that the institution has in different platforms.

At the end of the first academic period during the confinement, there was a 21% reduction in the students' general average in the acquisition of oral skills at the Language Institute. Several possibilities were analyzed among the teachers to understand the reasons for this situation, different review committees were established, and it was found that one of the areas in which there had been less development was speaking.

This institutional situation generated that several alternatives were proposed to improve the area of language development and acquisition. Among the proposed alternatives was the possibility of establishing a multidisciplinary team to generate gamified resources that were integrated into the (virtual) remote learning classrooms of students. This team then proposed a study to measure the impact of this proposal and its effectiveness in developing language skills, contrasting the ratings in the different areas of development.

Methodology

In order to determine the impact of gamified resources on the academic performance of language students at Indoamérica University, a quasi-experimental study was proposed, using

moderating and controlled variables. A group of teachers specialized in EFL prepared a series of guidelines to develop gamified pedagogical resources; teachers developed the products from the Graphic Design area of the University.

The specific objective of the study was to determine the incidence of gamified resources in the acquisition of oral production skills of students throughout an academic period. The number of sessions that students had contact with teachers for tutoring was considered a controlled variable; the study did not consider the demographic and socioeconomic aspects of the participating students.

In each modality, one of the groups had access to different gamified resources in its LMS platform throughout the academic period, while the other was allowed to use only the default resources of the institutional platform. After analyzing the ethical implications, it was established that the study did not compromise the students' grades or their right to quality education. Additionally, an informed consent process for the study was not required, and a confidentiality protocol was established so that the students would not know that they participated in this study, nor would their identity be revealed at the end of the study. Furthermore, the teachers are protected by their teaching freedom, which implies the possibility of planning, executing, and evaluating without undue and unreasonable interference.

Finally, to guarantee the study results and avoid unknown variables, an overview protocol was established, through which the same teacher was in charge of the four groups involved in the process. The teacher received constant advice and support from the project's research team throughout the process.

Involved Groups in the Study

The study involved 107 students of the first level of EFL, who were non-randomly distributed into four groups, according to the Table 1.

Table 1: Modality Group Study

Groups	Modality	Descriptions	Students
Group 1	Remote learning	First EFL level 5 Weekly sessions Gamified resources were applied	26
Group 2	Remote learning	First EFL level 5 Weekly sessions Restricted Gamified Resources	28
Group 3	Blended learning	First EFL level 1 weekly session Gamified resources were applied	27
Group 4	Blended learning	First EFL level 1 weekly session Restricted Gamified Resources	26

Tools Used in the Development of Resources

Once, understanding the conceptualization of the gamification feature in education and its benefits detailed above, this study is based on the use of gamified tools that allow developing

the areas of interaction, fluency, pronunciation, and accuracy to incorporate them in remote learning classes such as Kahoot, Lyrics training, Wordwall, Educaplay, H5P in free versions where each of them contributes to specific areas to acquire the EFL: elements of the skill of Speaking such discourse management, grammar, syntax, vocabulary, pronunciation, e interacción (Lazaraton, 2014) besides technological tools can provide students practice in real-time with sufficient language input. (Shumin, 2002)

KAHOOT!

Kahoot! It is a game student response system (GSRS) where in this case, the remote learning of the synchronous classroom is temporarily transformed into a game show in which the teacher is the game show host, and the students are the participants (Wang, 2015). Besides (Navarro, 2017) states that as a free platform, it allows the creation of evaluation questionnaires based on the game; therefore, it is a tool for the teacher to create debates, contests in the EFL learning space, making the students the central part of the learning with the help of their mobile devices.

It was used as a vocabulary test, use of grammar, useful expressions elements that take into account in the speaking skill development of the students of the planned units, as well as phonetic aspects and reading comprehension, individually and as a group and allows the student to know instantly their successes and errors, the score they are getting until reaching the end of the exercise. It also contributes to improving the memorization of concepts, facilitating the student the reduction and study time (Rodríguez-Fernández, 2017) Finally, the answers are stored on the teacher's home page carrying a follow-up and feedback.

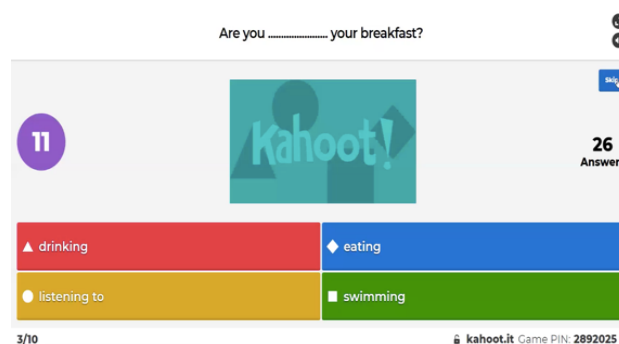


Figure 1: Interactive Tool Kahoot!

Wordwall

Wordwall creates interactive activities; this tool enables users to set up a countdown or a count forward as well as a leader board. The game mechanics stimulates a positive sense of competition among the participants (Bassani, Bezzi, & Mă, 2018) and (Jackson & Narvaez, 2013), increase vocabulary as a learning strategy through playing with new words, besides the dynamics of Wordwalls helps to remember terms that have been forgotten and are not usually handled of Wordwalls helps to remember terms that have been forgotten and are not usually handled.

The use of Wordwall game media was used to facilitate the student's learning of any foreign language vocabulary, in this case, in Vocabulary EFL classes according to the syllabus. When the student has already recorded in his memory the vocabulary, he can handle the lexicon with greater fluency for speaking and writing, (Aruperes, Liando, & Rorimpandey,

2018) being speaking skill one of the essential objectives of this research, that is to say, to achieve that the student, by increasing vocabulary, can communicate and develop appropriately in the productive oral skill of speaking.

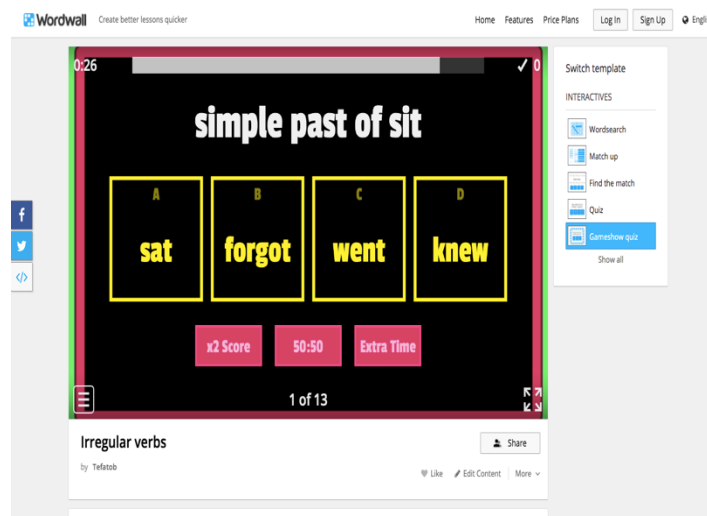


Figure 2: Interactive Tool Wordwall"

Lyrics Training, Listening, Didactic Strategy

The gamified tool "lyrics training" is an entertaining and effective way to acquire a language by using music videos through YouTube and developing listening skills. The songs that are applied in this type of English language teaching are popular and well known. The facilities it presents in scope, accessibility, and mastery make it a fun and optimal activity to practice the language.

Lyrics training is an invaluable open educational resource because it motivates and encourages to practice the language using authentic material presented in a friendly way, allowing reusing and adapting the same. Being authentic material, students will face different pronunciations and idioms, which makes the activity more attractive. (Batista, 2020) Speaking is closely related to or interwoven with listening, which is the primary mechanism through which language rules are internalized. (Cambridge, 2011; Shumin, 2002)

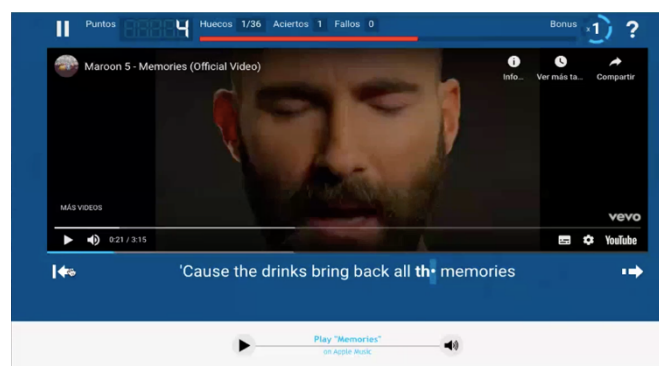


Figure 3: Interactive Tool "Lyrics Training"

H5P

Within the LMS, we have another gamified interactive resource, H5P, with a variety of interactive activities includes "Interactive multimedia with guest speakers, case study scenarios, interactive technical demonstrations, 360° virtual lab tours (both videos and still images, that include hotspots, roll-over information, animated. gifs, quizzes). Besides, it includes interactive diagrams with clickable hotspots and drag & drop activities; templated note-taking study guides; and check student's knowledge quizzes." (Wilkie, Zakaria, McDonald, & Borland, 2018). This allowed students to record sentences for repetition and correction, with feedback on the respective sounds and intonation in the language. These activities were developed according to the content planning in the speaking and vocabulary section. It has become an appropriate toolkit that can be applied both in class or pre/post class to facilitate blended active learning to upskill students.

Genially

This free version platform contains several templates of multiple uses; the most used with the study group was the so-called gamification, with embedded codes were placed in the institutional LMS and used as study material and support for classes in the general review of class topics, where it allowed students to practice their lexicon and reinforce their knowledge synchronously and asynchronously. (González & Gómez)

Socrative

This mobile application used in synchronous time contains questionnaires created by the teacher and works with specific codes and space race (timed questionnaires) that allow the student to register and be evaluated in EFL acquisition. It was used as an interactive gamified tool in sessions supporting the student lexicon as a formative assessment of the knowledge taught in class by giving high scores to the student who gets the answers correct and provides immediate feedback. Finally, the teacher can review these results in their repository of answers and monitor their performance to take different pedagogical and linguistic decisions.

Therefore, in this study, the incidence of the gamified tools for developing the grammatical, sociolinguistic, and discourse competencies mention significant relation in their application. Additionally, Reference Level Descriptions can give beneficial guidance on the linguistic features which students may get successfully on the A1 level according to CEFR. Considering descriptors for oral tasks helps the teacher decide what realistic expectations are at this level in different elements that involve the students' speaking skills.

Evaluation Areas

The linguistic skill corresponds to the Speaking or, in other words, the productive oral skill; the evaluated aspects were: Accuracy, Fluency, Interaction, and Pronunciation through a rubric. The CEFR scales describe levels in terms of what students can do and how well they can do it. At this level, a student can perform a task successfully but still make acceptable mistakes in their repertoire.

According to (Day & Krzanowski, 2011), level A1 students can understand and use familiar everyday expressions and fundamental phrases aimed at satisfying a concrete type's needs;

they can introduce themselves and others. They can ask and answer questions about personal details such as where they live, people they know, and things they have. They can also interact clearly, but communication depends on repetition at a slower speech rate, rephrasing, and repair.

Furthermore, students can manage very short, isolated, mainly pre-packaged utterances, with much pausing to search for expressions, articulate less familiar words, and repair communication in their fluency. Besides, a minimal repertoire of learned words and phrases can be understood with some effort by EFL speakers. While in their accuracy level, they manage basic grammatical structures, vocabulary, and familiar words related to A1 topics. (Division, 2001).

Evaluation Methodology

The evaluation consists of oral exams applied in each unit (3) and one as a summative evaluation with two sections: The first one, introduce yourself, 1-minute length where students mention their personal information. The second part was an interview with five questions related to the learned topics in the bi-monthly period with 3 minutes length where the student can keep the conversation, making their questions. And finally, 1-minute feedback and analysis.

Study Development

Throughout an academic period, four oral aspects were evaluated with two oral examinations, one for onsite (remote learning) and another for blended learning modality, using the same rubric as instruments in all groups to measure their performance.

Table 2: Experiment Group Distribution for Results Comparison

Evaluated areas	MLS + Traditional Resources	MLS + Gamified Resources
Interaction	Group 1 - Remote Modality	Group 2 - Remote Modality
Fluency	Group 3 - Blended Modality	Group 4 - Blended Modality
Pronunciation		
Accuracy		

Note: There were 4 aspects evaluated in 4 groups

During the academic period of the study, different educational support tools were developed and applied; the following table shows the areas of language skills acquisition and the resources used in each group in the different units.

Table 3: Teaching - Learning Selected Tools by Oral Development Areas

Areas	Traditional applied activities	Gamified Learning Tools Applied
Area 1 Interaction	Pair activities recording Dialogues Role plays	Teams calling recording KAHOOT online

Area 2 Fluency	Speaking one minute Face to face teacher Oral presentations	H5p
Area 3 Pronunciation	Oral repetition Online dictionary for pronunciation Phonetics practice	Lyrics training online app
Area 4 Accuracy	Running dictation Teacher-students correction Meaning negotiation	Kahoot online Genially Socrative Wordwall Educaplay

Results

For the data analysis, the academic records collected by the teacher are used, which contain the grades of the students in each language area acquisition applied in the four groups that were part of the study. For this process, the students needed to have known, verified, and accepted the grades; there were isolated cases in which the students requested regrades of specific contributions, which were verified via committee, and were formally addressed and resolved. Therefore, the results presented below represent a unilateral view of the teacher and the student's acceptance and recognition.

The following table shows the average grades obtained in the areas of language acquisition, considering the groups and modality. It can be seen that in the remote learning modality, the group that had access to gamified resources increased its average by 21.6%, while in the blended modality, the increase was 2.8%.

Table 4: Comparative results by modality

GROUPS	REMOTE LEARNING		BLENDING	
	Group 1.	Group 2.	Group 3.	Group 4.
Language Development Area	Traditional Resources	Gamified Tools	Traditional Resources	Gamified Tools
Interaction	6,5	8,3	6,9	6,9
Fluency	6,4	8,4	6,7	6,8
Pronunciation	6,6	8,3	7,0	7,2
Accuracy	6,7	8,3	6,8	7,3
Average	6,5	8,3	6,9	7,1

The following graph shows the performance of students in each group and each of the acquisition areas of oral language skills. Groups 2 and 4 are those in which gamified resources were applied, especially in group 2, in the remote learning modality, a significant

increase can be seen in the four areas of speaking, this increase has even presented consistent results throughout the period, it can be seen that the performance of students has grown steadily and equitably.

In group 4, in which gamified resources were applied in the blended modality, there is evidence of growth, especially in areas related to Pronunciation and Accuracy; however, the areas of Interaction and Fluency have not shown any variation.

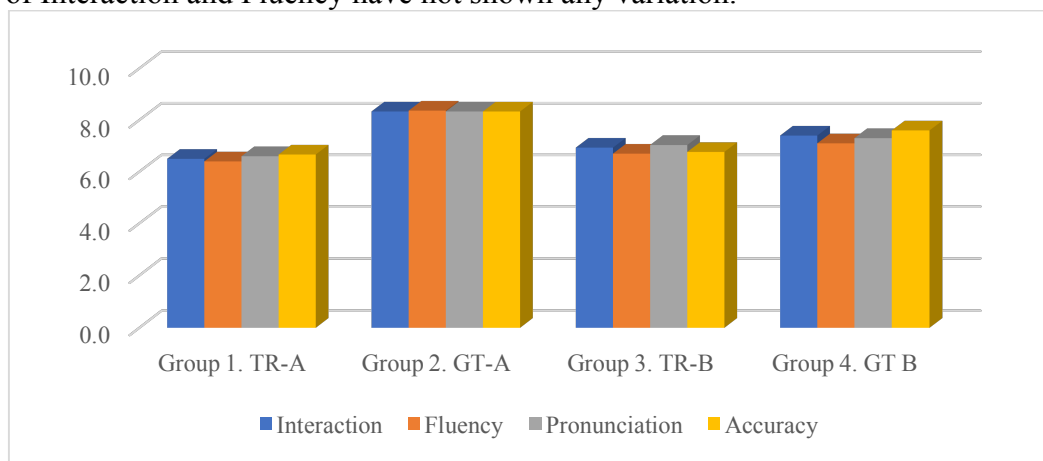


Figure 4: Oral Learning Development by Groups

Figures 4 and 5 show the results of the study by modality. In remote learning modality, it is evident that the gamified resources generated a significant improvement in the four areas; however, in the blended mode, it was not possible to replicate these results, but in any case, an upward trend can be seen, although the average is lower than in the remote learning model.

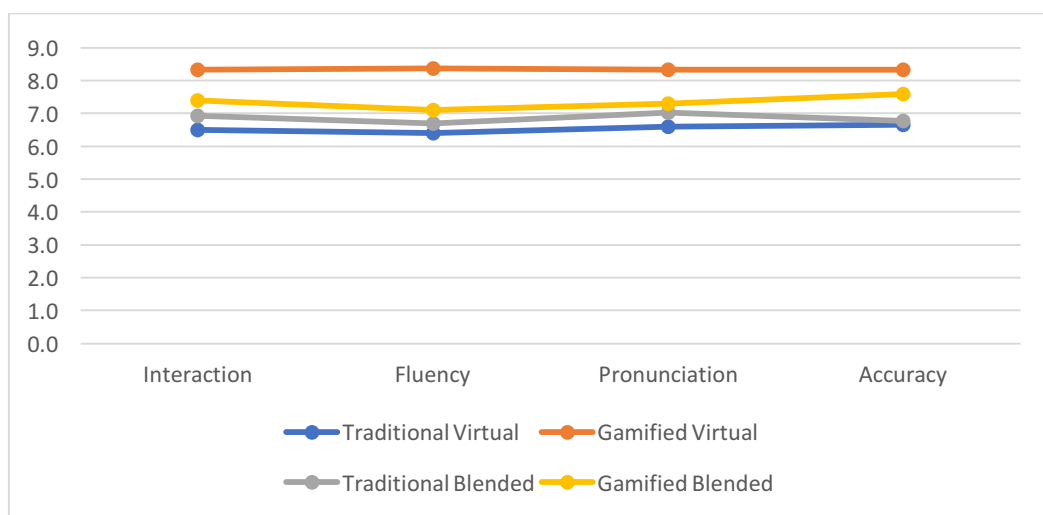


Figure 5: Language Area Developed by Modality

The courses that used gamified resources have a growing tendency to acquire language skills, both in remote and blended learning modalities. The aspects that seem to have more significant development with gamified resources are Pronunciation and Accuracy. The gamified activities achieved their objective of retention in oral communicative practice.

The aspect that seems to have less development with gamified resources is Fluency, it is necessary to continue reducing the affective filter in the students so that the pauses are not so frequent. Generally, this level is characterized by its simple Fluency in this skill.

Table 5 shows a retrospective analysis of how the study was carried out concerning two previous periods, the last one in face-to-face mode and the first in virtual modality. The course that used gamified resources in the virtual modality managed to raise the average to face-to-face modality levels. In the remote learning modality group, there was a significant improvement in Speaking using gamified resources. In the remote learning modality, there is a better distribution of averages among the evaluated areas. It seems that learning is at the same level. It is evident that in the blended modality, gamified resources could generate a slight improvement in areas such as Speaking and Reading.

Table 5: Retrospective Analysis

GROUP DESCRIPTION	On Site – Remote Learning			Blended		
	Before pandemic	First period pandemic	Second period pandemic	Before pandemic	First period pandemic	Second period Pandemic
	Regular group	Regular group	Gamified group	Regular group	Regular group	Gamified group
Speaking	7,52	5,9	8,3	7,84	7,2	6,9
Writing	8,1	7,6	8,4	7,45	7,4	6,8
Reading	8,3	7,4	8,3	7,5	8	7,2
Listening	8,25	7,3	8,3	7,3	7,2	7,3
Average	8,04	7,05	8,3	7,52	7,45	7,1

A remote learning course that used gamified resources improved its performance by 14% compared to a blended learning course. In the remote modality, there were measured four areas: interaction, fluency, pronunciation, and accuracy. As on site as online these were the main areas to develop speaking skills. After applying gamified tools, it is evident its improvement. Gamified tools in the remote modality showed that speaking can be significantly better to develop interaction, fluency, pronunciation, and accuracy.

Conclusions

Several activities are used face-to-face, such as activities in pairs, dialogues, oral repetition, dictation in progress, and teacher correction. These activities guide the teaching-learning process to use these resources in a communicative context, without memorizing, since learning a language allows communicating ideas, and although the repetition of phrases can be included, the important thing is the new production and attempts to strengthen this competence. (Iglesias Rodríguez, Olmos Migueláñez, Torrecilla Sánchez, & Mena Marcos, 2014)

Concerning the various gamified tools available to us, it was found that lyrics training, Kahoot, Educaplay, Wordwall, Genially, Socrative are instruments that can be incorporated to improve the assimilation of EFL in the oral skill. For the remote modality, since it is necessary to strengthen the communicative competence through structure information to understand what we hear or read, according to the hypothesis of comprehension, exposed by (Krashen, 2017)

That is to say that the ludic activities combined with the remote modality have allowed generating substantial learning environments because the learner connects with other people to participate in different online educational games, where the learner combines the time to dissipate his mind with a structured information environment. Therefore, the experience described here suggests that by mediating learning with these tools, it is possible in a substantial way to impact favorably and contribute to the challenges represented by today's society (García-Marulanda, 2018).

The analysis of the results indicates that during the face-to-face modality and applying the traditional activities described in previous pages, Speaking, Reading, Writing, and Listening skills maintained an average of 8.04. Once the pandemic began, these decreased by 12%. Besides, regarding the components of the oral skills collected, it could be seen that interaction, fluency, pronunciation, and accuracy had an average of 6.5 during the face-to-face period as opposed to an average of 8.3 with the application of gamified tools in the remote modality.

That is, students after this intervention were able to understand sentences and frequently used expressions related to areas of most immediate relevance (e.g., basic personal and family information, shopping, local geography, employment). They can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment, and matters in areas of immediate need. (Cambridge, 2011)

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Contact email: lquezada2@indoamerica.edu.ec
Danielripalda@uti.edu.ec
consuelodebrunnette@hotmail.com



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Naka Ward, Nagoya, Aichi
Japan 460-0008
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